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PRINCIPAL CONTENTS.

American Railroad Journal.

Saturday, December 13, 1851.

Relation of the Lakes to the Internal Commerce of the U. S.

We believe that a rapid change is going on in the direction of the internal commerce of the country, owing to the attractive influence of the great lakes, and the facilities they afford to the easy transmission of merchandise from one portion of the country to the other. Up to a comparatively recent period, the outlet of the western States was by the Mississippi river. The lakes now possess one to the Atlantic, in the Erie canal, much superior, as far as directness, safety and despatch are concerned, to any of the western rivers. Trade is consequently attracted to the former, and this trade is rapidly building up cities upon their borders.—These cities, as they grow up, will constantly enlarge the sphere of their influence, and the area of country dependent upon them. They will become the great receiving and distributing points of the produce and merchandise exported from, and imported into, the western States. All the canals, and the more important lines of railroad in that section of the country, are based upon the lakes, through what is found the cheapest and most convenient outlet for the produce of the regions they traverse.

For the reasons given, we shall find, for the next ten years, that the most rapidly growing towns in the west will be those situated upon the lakes. We believe that Chicago is destined to be the second, if not the largest city in the United States, west of the Allegheny Mountains. It possesses all the elements necessary to constitute a great city, in its unrivalled position at the foot of Lake Michigan, in being surrounded by an exceedingly fertile country, and in being situated in the vicinity of vast coal fields, and in being the future centre of numerous and important lines of railroad. It may not outstrip Cincinnati, but it certainly will every other western city. For similar reasons, Cleveland, Toledo, Sandusky and Detroit, must become important cities, each of which will command their share of trade. Cincinnati, Louisville and St. Louis, must continue to grow rapidly, but we do not believe that they will maintain their present relative positions compared with the lake cities. The latter must, to a great extent, become the importing and exporting ports for the former, and derive all the advantages resulting from such a relation.

The lakes, therefore, must become the great theatre of the commerce of the west. Our Atlantic cities, that are contending for this trade, should bear in mind, that they must reach it through these great water courses; and their ability to compete for this trade, will depend upon the excellence of the routes by which they are reached. The one that possesses the cheapest and best route to them must in the end distance all its competitors.

It is a remarkable fact, that all our great eastern cities are about equi-distant from the lakes. Philadelphia and Baltimore are, in fact, nearer to Lake Erie than New York. Boston reaches the navigable waters of Lake Ontario in about the same distance that the cities named reach Lake Erie. On the score of distance, the position of our great towns are pretty nearly equal, and if they can preserve a similar equality in the routes by which they reach the western waters, all may expect to command a portion of the trade that falls upon them. Boston and New York have already opened their lines. We believe that it is vastly important Philadelphia and Baltimore should follow their example. Philadelphia is now endeavoring to secure her connection through the Sunbury and Erie road. As Baltimore will connect with this road at Williamsport, this line will be common to both, from that place. By constructing a road from Wheeling to Wellsville, Baltimore would have, in connection with the Cleveland and Wellsville road, an independent line to Cleveland. Upon the lakes are to be the great store houses of the west, and the best route from them to the Atlantic coast, will constitute the key that will unlock the door to their treasures.

Pneumatic Pile Driving.

As we believe the process of sinking the formations of bridges and piers upon the above principle to be a great improvement over the coffer-dam, or the ordinary mode of pile driving, we place before our readers a detailed statement of this process, as practically tested in England. We believe it could be used with great economy, and would be the means of securing much more permanent structures than those built upon any other method:—

This is an entirely new and strikingly effective process for causing bodies of a given form and in certain situations, to descend into the earth, to a very considerable depth, with an ease and rapidity approaching those with which, from their own specific gravity, they would descend in water.

Our earth is surrounded by a mass of material fluid, known as *air*, extending for about 45 miles perpendicularly from every portion of its surface. A column of this air, rising throughout its entire height, and of one inch diameter, is of the weight of about 15 lbs. Upon every square inch of surface just such a column is of course continually incumbent, and hence the pressure of the atmosphere is commonly said to be "equal to about 15 lbs. to the square inch." Now this enormous pressure—amounting to nearly a ton upon every square foot, is sufficient to crush almost everything beneath it; but the pressure of fluids is equal in all directions; and hence, to us, it remains imperceptible; just as that of water does to fish. It is however only necessary to withdraw, or partially extract, the air from a given receptacle or enclosed space, to destroy this counteracting pressure, and, with appliances adapted to the purpose, to cause the natural and inevitable results to become palpably apparent.

Of these facts the inventor of the present process has availed himself, to work out effects both novel and startling in themselves and important and valuable to the community. This process is available for the formation of shafts for mines and wells; but the purpose to which it is at present chiefly applied, is the sinking of piles to form foundations for the construction of harbors, docks, railroad bridges, lighthouses, beacons, batteries, banks for the reclamation of waste land from the sea, etc.

The manner in which this operation has until lately been performed is this:—the piles are driven

into the earth by means of a weight, which is wound up to the top of a frame, and then allowed to fall, some dozen feet or more, upon the pile beneath. This procedure is at times extremely tedious, laborious, and expensive, and in some cases wholly ineffectual. Solid particles under pressure have a tendency to form natural arches; anything forced among them is driven between such arches, and hence its descent becomes extremely difficult, notwithstanding its being wedge-shaped or pointed in the manner customary. Such, indeed, is the resistance offered, that, on the Goodwin Sand, a steel bar could be forced only 8 feet down with a sledge-hammer; and Capt. Bullock, R. N., found that a pointed iron rod of 3 inches diameter, when sunk 13 feet in the sand, required forty-six blows of a monkey weighing 1 cwt., with 10 feet fall, to drive it *one inch* deeper! Engineers, in fact, admit that hitherto piles have frequently been driven by a *cross-cut saw*—that is, the workmen have found it easier to cut them off at the top than to accomplish the physical impossibilities expected of them when provided only with the appliances hitherto employed.

By the new process, however, the resistance spoken of is overcome or utterly annihilated, and piles are sunk to any depth required, by other, instantaneous, and far more powerful agency than could result from the application of any force that we possess. Such operations are usually carried on in sand, shingle clay, etc., forming the bed of an arm of the sea, or of a river, or in swampy ground, and, in general, it is necessary, in the new process, that there shall be some small depth of water over the spot selected; and this, if not present, may be readily supplied.

The form of pile used is a hollow cylinder or tube, of any convenient shape, diameter and length, and having each of its ends open. This tube is placed perpendicularly over the spot which it is required to penetrate, the lower end passing through the water, and resting on the surface beneath. To the upper end, is fitted a moveable cover, having an aperture to admit the suction pipe of an exhausting air pump; and, such pipe being inserted, and the air pump with which it communicates, set in action, the effect becomes immediately obvious, the tube beginning instantly to sink, and rapidly burying itself, the material through which it passes rushing in to fill up the vacuum caused by the partial withdrawal of the air, and passing up the tube and through the suction-pipe of the air pump, into the receiver provided for it, leaving the tube ready for the reception of whatever material may be thought proper to fill up and render it a solid column.

The negative, though fundamental cause of this ascent of the solid material, is certainly the withdrawal of the air from the interior of the tube; but the immediate one is the enormous pressure of the air on the comparatively large external surface around the tube, which pressure of course always exists in what may be called a latent state, and only becomes sensible or apparent to us on the removal of it from the enclosed surface in the manner described, and the destruction of the natural equilibrium thereby effected.

The causes of the descent of the tube are two; the weight or pressure of the air incumbent on the top or cover, combined with the weight of the tube itself; and the undermining process in operation at its lower edges, from the constant giving way of the solid particles in contact with them, as they rush into the vacant interior, in consequence of the pressure on the external surface above; which pressure is thus shown to be the most important and effective of the causes in operation.

The tubes, thus sunk, may be rendered solid throughout, by filling them with a concrete composed of a mixture of shingle, or the like, with any of the cheap cements adapted to the purpose—of which there are several kinds. Solid piles, like those hitherto employed, are sunk in a precisely similar manner; the lower end of each of them being fitted with a hollow casing, a foot or less in depth, called a "shoe," and having in its top an aperture for the insertion of the suction-pipe, which descends with it, and is afterwards detached and drawn up. By means of a contrivance termed a *jacket*, a rock lying below sand or shingle may be penetrated with implements already known, and the solid pile inserted into it, whenever it may be desirable.

The depth attainable by this process may be considered, for all practical purposes, unlimited: water may be removed by it to a depth of 30 feet, and solid material* to one very much greater. The rate at which the tubular pile, or caisson, descends, is dependent on the rapidity of the extraction of the atmospheric air from its interior. With a good pair of air pumps, of proportionate size and well worked, the descent is surprising, but with the assistance of a *Voider* or large vessel previously exhausted of its air, it is almost instantaneous, particularly when shingle beach and boulders form the material to be acted on. The weight the tubes are capable of sustaining when sunk and filled up, is enormous. Nineteen, each one foot in diameter, and 16 feet in length, sunk by this process in sand eighty feet in depth, support a pier of a stone viaduct passing over an arm of the sea in Anglesey, and sustain a weight of 600 tons without sinking a hair's breadth.† The Trinity Board have purchased a license for the use of the process, and are constantly employing it. Several beacons have thus been placed on sand-banks and in other dangerous situations; a tube 2½ feet in diameter, has been sunk 33 feet into the Goodwin Sand,‡ where, as already stated, Admiral Beaufort could force a steel bar only 8 feet down; and there seems every reason to believe that by means of this invention those frightful shifting sands might now be fixed, and a harbor formed, at a comparatively inconsiderable cost.

The material of which the tubing is composed is in general cast iron, but any other, when more suitable, may be employed; such, for instance, as the Artificial Granite patented by Mr. Buckwell, and consisting of a silicious cement, enveloping a mass of shingle, flint, &c., capable of being moulded into tubular cylinders of any form or capacity, and which he states are to be obtained at about two-thirds the cost of brick. Tubes of cast iron will not be injuriously affected by the action of salt water; the constituents of which, entering into chemical combination with the iron, dissolve only a sufficient portion of it to form the material in contact with the metal into a concrete of the most enduring kind. It is common to find the bolts and other iron-work of vessels lost upon the coast, amidst a hard mass of conglomerate thus created, and the inventor of the present process is in possession of part of such a concretion, of which a cast-iron pitch-kettle formed the nucleus. It is clear, therefore, that sand, etc., into which such tubes had been sunk, would rapidly be converted into conglomerate rock; but this effect may be prevented by defending the metal from the action of the water by means of a coating of varnish or pigment adapted to the purpose.

Where the tube is required to be of large dimensions—as in the case of an insular detached erection of any kind, it may be constructed—after the manner of a bottomless vat, of a number of staves like pieces of wood. These vat-like tubes may be of a large diameter, and the upper portions of them so fitted up as to become secure habitations for persons occupied in the cultivation of reclaimed land, or engaged in fishing, pilotage, etc., or the staves may be merely temporarily pinned together, and the tube, so constructed, having been floated to the spot required, and sunk to the proper depth, a rock of concrete—cement and shingle, into which masts or wrought iron bars may be inserted, may be formed in it, and the staves loosened and withdrawn, leaving behind them a column of perfectly solid rock, and ready to be applied to the formation of similar structures *ad infinitum*.

A succession of tubes may be added longitudinally to the first, if necessary, by means of screw, flange, cement, or other joints, so as to form a column of any length; the shape may be cylindrical, angular, or conical, so as to cause them to fit each other laterally, and form a continuous line or wall; and their diameter may range from one-eighth of an inch to 50 or 60 feet.

The expense and loss of time occasioned by the construction of coffer-dams may thus be avoided; and it is a striking characteristic of the process, that while the descent of the piles, although so rapid, may be graduated to the greatest nicety, once thus sufficiently inserted, it becomes impossible to force them deeper by any amount of pressure that can be applied.

* It is found, in practice, that not only will sand, shingle, mud, bog, and clay, be carried up the pile, but even large stones are carried in suspension, so that every kind of soil can be mastered, except rock, and there it is not wanted, because there is a solid foundation.—*Civil Engineer's Journal.*

The whole of the Artesian Well, now proposed for supplying the Metropolis with pure water, might be sunk by means of this process, in a very short space of time, and at a cost much within that at present estimated for them.

† From a communication recently received from Frank Forster, Esq., Superintending Engineer, it appears that this foundation, placed in a situation where the wash is very great—owing to the force of the current and the movable nature of the sand, has now stood for nearly two years, and is found to answer perfectly. Mr. Forster adds,

"Such is my opinion as to the efficacy of your hollow piles on the large scale, that I intend to sink the first shaft I have through quicksand requiring hollow iron cylinders, by means of your process."

‡ During the past summer, (1849) tubes 2½ feet in diameter have been sunk on these sands, to the depth of 60 feet.

The Topographical Survey of the Lakes.

The topographical survey of the lakes, the Detroit Free Press says, is now confined to the straits of Mackinac, and the work the past season has been conducted by Capt. J. N. Macomb, First Lieut. J. W. Gunnison, First Lieut. E. P. Scammond, and Second Lieut. W. F. Reynolds, of the corps of Topographical Engineers; Jacob Houghton, Jr., H. Gillman, and W. Hearding, of Michigan, and J. E. Potter, of Ohio, Civil Engineers and assistants. The general direction of the work has been in the hands of Col. Abert, Chief of the Topographical Bureau at Washington. The whole party numbers about seventy-five. This force has been divided, and a portion occupied on the mainland coast, the island having been principally sounded and nearly completed, so as to enable Capt. Macomb to form the charts. To give some idea of the elaborateness and accuracy of the survey, the small island of Bois Blanc, about four miles in circumference, has eight points under the main triangulation, and in all these there are twenty-eight points. Among other important facts disclosed by this survey is, that about seventeen miles east north-east of Mackinack, among what is called the snows, (chemeaux,) there is a fine harbor, completely land-locked, and having at its entrance six or seven fathoms of water. The Free Press has a note from one of the party, correcting the opinion which has been entertained, that the waters in the vicinity of Saginaw Bay are of unfathomable depth. Soundings have been taken and bottom found at the depth of twenty-eight fathoms and at thirty-two fathoms. The soundings were taken at points forty-two and fifty miles from Thunder Bay lighthouse. The bottom is of sand, black and white specks. In the narrow part of St. Clair river bottom was found at the depth of seventeen fathoms. The same writer says:—There is no account of any accurate soundings to show that any point in the bottom of Lake Huron is as low as the surface of the ocean, altho' it has frequently been stated to descend below that level."

Ship Canal at the Sault.

We are glad to note that a determined movement for the accomplishment of this very important work has been started in the right quarter. The Detroit Free Press says:—

"A survey or reconnoisance is now in progress at Sault Ste. Marie, of the proposed ship canal, by Wm. Wiley, Esq., of the Central railroad, who left here for that purpose some days since. Mr. Wiley's experience as a practical engineer will doubtless be of essential service in the matter, and his report is expected to be incorporated into a memorial to be laid before Congress at its approaching session, in behalf of this much needed improvement."

Census of 1850.

We lay before our readers the following interesting statistics compiled from the census of 1850.

Since the census of 1840, there have been added to the territory of the republic, by annexation, conquest, and purchase, 635,988 square miles, and our title to regions covering 341,463 square miles, which before properly belonged to us, but was claimed and partially occupied by a foreign power, has been established by negotiation, and it has been brought within our acknowledged boundaries. By sueh means, the area of the United States has been extended during the past ten years from 2,055,168 to 3,221,595 square miles without including the great lakes which lie upon our northern border, or the bays which indentate our Atlantic and Pacific shores; all which has come within the scope of the seventh census.

In the endeavor to ascertain the progress of our population since 1840, it will be proper to deduct from the aggregate number of inhabitants shown by the present census the population of Texas in 1840, and the number embraced within the limits of California, and the new territories at the time of their acquisition. From the best information which has come to hand, it is believed that Texas contained in 1840, 75,000 inhabitants, and that when California, New Mexico and Oregon came into our possession in 1846, they had a population of 97,000. It thus appears that we have received by additions of territory since 1840 an accession of 172,000 to the number of our people.

Assuming the population of California to be 165,000 (which we do partly by estimate,) and omitting that of Utah, estimated at 15,000 the total number of inhabitants in the United States, was, on the 1st of June 1850, 23,246,301.

The absolute increase from 1st June, 1840, has been 6,176,848, and the actual increase per cent. is 36,18. But it has been shown that the probable amount of population acquired by additions of territory should be deducted in making a comparison between the results of the present and the last census. These deductions reduce the total population of the country as a *basis of comparison*, to 23,074,301, and the increase to 6,004,848. The relative increase after this allowance, is found to be 35.17 per cent.

The aggregate number of whites in 1850, was 19,619,366, exhibiting a gain upon the number of the same class in 1840, of 5,423,371, and a relative increase of 38.20 per cent. But excluding the 153,000 free population supposed to have been acquired by the addition of territory since 1840, the gain is 5,270,371, and the increased per cent. 37.14. The number of slaves by the present census is3,198,298, which shows an increase of 711,085, equal to 28.58 per cent. It we deduct 19,000 for the probable slave population of Texas in 1840, the result of the comparison will be slightly different. The absolute increase will be 692,085, and the rate per ct. 27.83.

The number of free colored in 1850 was 428,637, in 1840, 386,245. The increase of this class has been 42,392, or 10.95 per cent.

From 1830 to 1840 the increase of the whole population was at the rate of 32.67 per cent. At the same rate of advancement, the absolute gain for the ten years last past would have been 5,578,333 or 426,515 less than it has been, without including the increase consequent upon additions to the territory.

The aggregate increase of population from all sources, shows a relative advance greater than that of any other decimal term, except that from the second to the third census, during which time the country received an accession of inhabitants by the purchase of Louisiana, considerably greater than one per cent. of the whole number. Rejecting from the census of 1810, 1.45 per ct. for the population of Louisiana, and from the census of 1850, 1 per cent. for that of Texas, California, &c., the result is in favor of the last ten years by about one-fourteenth of one per cent., the gain from 1800 to 1810 being 35.05 per cent., and from 1840 to 1850, 35.12 per cent. But without going behind the sum of the returns, it appears that the increase from the second to the third census was thirty-two hundredths of one per cent. greater than from the sixth to the seventh.

The relative progress of the several races and classes of the population is shown in the following tabular statement.

Increase per cent. of each class of inhabitants in the United States for sixty years:—

	1790 to 1800.	1800 to 1810.	1810 to 1820.	1820 to 1830.	1830 to 1840.	1840 to 1850.
Whites	35.68	36.18	34.30	34.52	34.72	38.20
Free colored	82.28	72.00	27.75	34.85	20.88	10.95
Slaves	27.96	33.40	29.57	30.75	23.81	28.58
Total colored	32.23	37.58	29.33	31.31	23.40	26.16
Total population	35.02	36.50	33.35	33.92	32.67	36.18

The census had been taken previously to 1830 on the 1st day of August; the enumeration began that year on the first of June, two months earlier, so that the interval between the fourth and fifth census was two months less than ten years; which time allowed for, would bring the total increase up to the rate of 34.36 per cent.

The tables given below show the increase from 1790 to 1850, without reference to intervening periods:—

	1790.	1850.	Absolute increase in sixty yrs.	Increase per ct. in sixty-yrs.
Number of whites	3,172,464	19,630,019	16,457,555	52,797
Free colored.	59,466	428,637	369,171	61,741
Slaves	697,897	3,184,262	2,486,365	35,013
Total free colored and slaves	757,363	3,612,899	2,855,536	377
Total population	3,929,827	23,246,301	19,316,417	491,152

Sixty years since, the proportion between the whites and blacks, bond and free, was 4,2 to 1. In 1850, it was 5,26 to 1, and the ration in favor of the former race is increasing. Had the blacks increased as fast as the whites, during these sixty years, the number on the 1st of June would have been 4,657,239, so that, in comparison with the whites, they have lost in this period 1,350,340.

This disparity is much more than accounted for by European emigration to the United States.

Dr. Chickering, in an essay upon Immigration, published at Boston, in 1848, distinguished for great elaborateness of research, estimates the gain of the white population, from this source at 3,922,152. No reliable record was kept of the immigrants into the United States, until 1820, when, by the laws of March, 1819, the collectors were required to make quarterly returns of foreign passengers arriving in their districts. For the first ten years the returns under the laws afford materials for only an approximation to a true state of the facts involved in this inquiry.

Dr. Chickering assumes, as a result of his investigations, that of the 6,431.088 inhabitants of the United States in 1820, 1,430,906 were foreigners arrived subsequent to 1790, or the descendants of such. According to Dr. Seybert, an earlier writer upon statistics, the number of foreign passengers from 1790 to 1810, was, as nearly as could be ascertained, 120,000; and from the estimates of Dr. Seybert, and other evidence, Hon. George Tucker, author of a valuable work on the census of 1840, supposed the number from 1810 to 1820 to have been 114,000. These estimates make, for the thirty years preceding 1820, 234,000.

If we reckon the census of immigrants at the average rate of the whole body of white population during these three decades, they and their descendants in 1820 would amount to about 360,000.

From 1820 to 1830 there arrived, according to the returns of the custom houses, 135,986 foreign passengers, and from 1830 to 1840, 579,370, making for the twenty years 715,356.

During this period a large number of emigrants from England, Scotland, and Ireland, came into the United States through Canada.

Dr. Chickering estimates the number of such from 1820 to 1830 at 67,998, and from 1830 to 1840 at 199,130; for the 20 years together, 267,128.—During the same time a considerable number are supposed to have landed at New York, with the purpose of pursuing their route to Canada, but it is probable that the number of these was balanced by omissions in the official returns.

Without reference to the natural increase then, the accession to our population from foreign sources from 1820 to 1840, was 982,479 persons.

From 1840 to 1850 the arrivals of foreign passengers in the ports of the United States have been as follows:—

1840, '41	83,504
1842	101,107
1843	75,159
1844	74,607
1845	102,415
1846	202,157
1847	234,756
1848	226 524
1849	269,610
1850	173,011
	1,552,830

As the heaviest portion of this great influx of immigration took place in the latter part of the decade, it will probably be fair to estimate the natural increase during the term, at 12 per cent, being about one-third of that of the whole white population of the country at its commencement.

This will swell the aggregate to 1,739,192. Deducting this accession to the population from the whole amount of the increase of white inhabitants before given, that increase is shown to be 3,684,519, and the rate per cent is reduced to 25·95.

The density of population is a branch of the subject, which naturally first attracts the attention of the inquirer. The following table has been prepared from the most authentic data accessible to this office.

Table of the Area, and the number of Inhabitants to the square mile, of each State and Territory in the Union.

States	Area in square miles.	Population in 1850.	No. of inhabitants to square mile.
Maine	30,000	583,188	19·44
New Hampshire.	9,280	317,964	34·26
Vermont	10,212	313,611	30·07
Massachusetts	7,800	994,499	126·10
Rhode Island	1,360	147,544	108·04
Connecticut	4,674	370,791	79·33
New York	40.000	3,097,394	67·66
New Jersey	8,320	489,556	60·04
Pennsylvania	46,000	2,311,786	50·25
Delaware	2,120	91,535	43·64
Maryland	9,356	583,035	62·31
Virginia	61,352	1,421,661	23·17
North Carolina	45,000	868,903	19·30
South Carolina	24,500	668,507	27·28
Georgia	58,000	905,999	15·68
Alabama	50,722	771,671	15·21
Mississippi	47,156	606,555	12·86
Louisiana	46,431	511,974	11·02
Texas	237,321	212,592	·89
Florida	59,268	87,401	1·47
Kentucky	37,680	982,405	26·07
Tennessee	45,600	1,002,625	21·98
Missouri	67,380	682,043	10·12
Arkansas	52,198	209,639	4·01
Ohio	33,964	1,980,408	49·55
Indiana	55,405	988,416	29·23
Illinois	56,242	851,470	15·36
Michigan	56,243	397,654	7·07
Iowa	50,914	192,214	3·77
Wisconsin	53.924	305,191	5·65
California	188,981	....	....
Minnesota	83,000	6,077	·07
Oregon	341,463	13,293	·03
New Mexico	210,744	61,505	·28
Utah	187,923	....	....
Nebraska	136,700	....	....
Indian	187,171	....	....
North West	587,554	....	....
Dist of Columbia.	60	51,687	861·45
	3,221,595	23,080,792	

[It will be noted that the population of California, and the territories of Utah, Nebrasca, the Indian and Northwestern territories, is not included in the above table—the official returns not having been received.—*Jour of Com.*]

From the location, climate, productions, and the habits, and pursuits of their inhabitants, the States

of the Union may be properly arranged into the following groups:

	Area of square miles.	Population.	No. of inhabitants to square mile.
New England States.	63,226	2,727,597	43·07
Middle States, including Maryland, Delaware and Ohio.	151,760	8,653,713	57·02
Coast planting States, including S. Carolina, Georgia, Florida, Alabama, Mississippi and Louisiana	286,077	3,537,089	12·36
Central slave States, Virginia, N. Carolina, Tennessee, Kentucky, Missouri and Arkansas	308,210	5,168,000	16·75
Northwestern States, Indiana, Michigan, Illinois, Wisconsin and Iowa	250,000	2,735,000	10·92
Texas	237,000	212,000	·89
California	189,000	165,000	·87

There are points of agreement in the general characteristics of the States combined in the above groups, which warrant the mode of arrangement adopted. Maryland is classed, as heretofore, with the Middle States, because its leading interests appear to connect it rather with the commercial and manufacturing section to which it is here assigned, than with the purely agricultural States. Ohio is placed in the same connection for nearly similar reasons. There seems to be a marked propriety for setting off the new agricultural States of the northwest by themselves, as a preliminary to the comparison of their progress with other portions of the Union. The occupations which give employment to the people of the central range of States south of the Potomac, distinguish them to some extent from that division to which we have given the appellation of coast planting States.

To be continued.

Commerce of Cleveland.

The Cleveland Herald states the receipts by canal, at that place, to be larger than those of last year, notwithstanding the opening of the railroad. It gives the following figures for the two past years, for the articles of wheat and corn:

The receipts of Wheat the present year, to the 15th inst. are	2,529,699
In 1850, to same date	1,192,559
Increase, bush	1,337,140
Receipts of Corn in 1851, bush	998,059
" " 1850, "	831,704
Increase, bush	166,355
Receipts of Flour in 1851, bbls	645,730
" " 1850, "	367,737
Increase, bbls	277,993

At 70c per bushel for the wheat, 40c for the corn, and $3 25 per bbl. for the flour, the value of the increased amount of these three articles since 1850, is $1,906,038 25.

The Galena Advertiser gives an account of a discovery of lead ore, which promises to surpass anything of the kind on record. It was made about two miles north-east of the Linsipheur Mound, is two miles distant from any other diggings, on a farm in the prairie, and was made by a boy finding mineral in a creek. On examining the bottom of this creek, it was found to be almost a solid mass of lead ore for some ten or twelve feet in width. Some three or four holes have been sunk about four feet in the clay, on each side of the creek, and specimen of large black mineral taken out, weighing from fifty to one hundred pounds.

Virginia and Tennessee Railroad.

Report of the Chief Engineer, offered November 25, 1851.

GENTLEMEN—In compliance with established usage, I present the following annual report. The difficulties encountered in executing the work between Lynchburg and Salem have been greater than was expected. Every part of the work has been prosecuted diligently, and, on the deep excavations, containing rock, all the force that could be worked to advantage has been employed. It was, however, found impossible to complete the difficult points in time to lay the whole track as soon as proposed.

These points being near the eastern terminus of the road, it was necessary to incur some expense in hauling iron in order to finish the track at as early a day as possible. This additional expense will be amply repaid by the use of the road some months sooner than could otherwise be expected.—It may now be promised, with certainty, that the road will be in operation to Liberty in the month of January, to Buford's in the month of March, and to Salem in July. And ten miles beyond Salem can go into operation in six weeks after the the road reaches that point For this ten miles the iron is not yet purchased. The track of this road consists of a U rail, weiging 60 lbs. to the yard, laid on substantial oak, chestnut or locust crossties, 9 feet long, averaging in size about 6½ by 10 inches, and laid every two and a half feet. The timber is much larger, and of better quality than that generally used on railroads, affording great firmness and security to the track. The iron rails are of the very best quality of imported rails.

The chairs are cast iron of the very best quality that can be made from the Virginia ores, they weigh 19 lbs., and are cast with a projection to fit into the hollow of the rail. This metal possesses great toughness. The spikes too are made of the very best bar that can be produced from Virginia charcoal pig, and are superior to any others, made from different metals.

The track is believed to combine every quality essential to a good road, in an eminent degree, and to secure, in the future operations of the company, both safety and economy. Few, if any, can be found of better materials or better construction — The passenger trains will be able to attain a speed of thirty miles per hour, on this road, with perfect safety. Under the contract with Mr. F. B. Deane, Jr., the cars necessary to equip the road, are now in process of construction at this place, and the quality of the work, as far as it has progressed, is such as to vindicate fully the policy of the board in securing these articles of Virginia manufacture.—A sufficient number of these cars, for present use, will be completed by the end of next month. The contract with Joseph R. Anderson, Esq., of Richmond, was limited to five locomotives, one of which is to be completed by the first of December, and can be on the road by the middle of that month. Great care has been used in selecting the materials for these machines, and it is to be hoped that their performance will be such as to do credit to the enterprising builder.

A great amount of work has been done on the line between Salem and Wytheville, a heavy force having been engaged for the past year. The ten miles ascending the Alleghany Mountain, north of Christiansburg, constitute the heaviest portion of our work, and it would be difficult to complete it sooner than May, 1853. If the remainder of the road could be let by August next, all the graduation could be easily completed, as soon as this ten miles.

After the grading is completed the superstructure can be laid at the rate of ten miles per month. This would secure the completion of the work by June, 1854, if no delay should occur for want of money, even if the remainder of the line should not be placed under contract, until the end of next year. So that nothing would be gained by placing the light work beyond Wytheville under contract before a year hence. The greater part of the distance between Wytheville and the State line is very light.

A party of engineers has been employed for the last twelve months in revising and improving the line from Salem to the State-line, and completing the definite location, with the exception of a few weeks devoted to the New river survey. The exact length of the road, as now located, is 204 6-10ths miles, and the examinations have resulted in important improvements in the character of the line. It is believed that some time may yet be profitably spent in this way. A company can pay no money more profitably than that which is expended in the thorough examination of the country before a final location is made.

The party were engaged about six weeks in making a survey, from a point near Christiansburg, on our road, down New river to the mouth of Indian Creek. At this point, they connect with a survey made under the authority of the State.

From Christiansburg to Indian Creek, a very favorable route is found. No grade exceeding 60 ft. per mile rising eastward, and none greater than 68 feet per mile falling eastward would be required—thus preserving the same limits of graduation used on the Virginia and Tennessee railroad.

The descent from the summit at Christiansburg, is by a succession of grades—none exceeding 60 feet per mile, and no very expensive work is encountered.

The valley of New river is reached near Major James Kent's; after which the work is light and the grades are very gentle. In a few places the maximum grades are used for short distances, to cut off bends of the river and save distance.

From Christiansburg to the mouth of Indian Creek, is 62½ miles, and will cost $1,002,500, or $17,000 per mile. We find in Mr. Shaw's report, the distance from Indian Creek to Greenbrier, to be 14¾ miles, and the cost of graduation, bridging and masonry to be $77,760—adding $105,000 for superstructure will give for the cost of 77¼ miles, from Christiansburg to the mouth of Greenbrier, $1,248,200, or a fraction under $16,000 per mile.—But to cover the cost of depots, cars, engines, and all contingencies, we will call it $20,000 per mile, which, for 77¼ miles, is $1,545,000.

Let us compare the two routes proposed between the mouth of Greenbrier and Richmond. First by the Central railroad, we have the following distances:

From Richmond to Charlottesville	100	Miles.
" Charlottesville to Staunton	40	"
" Staunton to Covington	70	"
" Covington to mouth Greenbrier	76	"
	286	"

The distances by way of Christiansburg, Lynchburg, etc., are—

From Richmond to Lynchburg	115	Miles.
" Lynchburg to Christiansburg	86	"
" Christiansburg to the mouth of the Greenbrier	77¼	"
	278¼	"

Making a distance of 7¾ miles in favor of the Lynchburg route. On this route the grades are 60 feet per mile, opposing the heavy trade, and 68 feet with it—while on the Covington and Staunton route, there are grades of 105 feet per mile, both ways—five continuous miles of it on the eastern slope, and 1½ on the western slope of the mountain. This last may be substituted by 2 miles of 92 and 4-10ths feet per mile, but of course the expense would be increased.

This feature would alone enable the Lynchburg line to compete successfully with the Central railroad for all the tonnage offered for transportation between the mouth of Greenbrier and the city of Richmond. But suppose this western trade, or any portion of it, to be destined for Petersburg or Norfolk, this road would then be 30 miles shorter than the Central to either of these points.

So that the Lynchburg route is the shortest for all three of the towns on the lower James river, and a trade sufficient to increase them all three, beyond the most sanguine expectations of their friends, and build them up into large cities capable of entering into competition with the great markets of the north would be secured to them and carried out of the reach of Baltimore. With a railroad from Staunton to Winchester, it would not be difficult to predict where all the tonnage brought from New river to Staunton would find a market. There should be no rivalry between the markets of Virginia; if true to themselves, they can all flourish.

Let them lay aside all jealousies, and exert their united strength to complete the shortest, the cheapest, the most efficient, and in all respects the best route to the Ohio river, as well as to the Tennessee line. Let each town and city secure a connection with this great trunk, and there will be a commerce poured down on our eastern border which will fill the measure of their prosperity. Such a system faithfully carried out, would at once erect Virginia with her diversified interests and pursuits into a powerful empire. Let them faithfully investigate the subject, and adopt the best route, whichever that may be. And here let us take another view of this question. It has been shown that the line through Lynchburg gives Richmond the nearest line, with the best grades to the mouth of Greenbrier. The stock is already provided, and a large portion of the work is done, for a road from Richmond to Christiansburg, within 77¼ miles of the mouth of Greenbrier. This distance alone remains to be provided for, and will cost at the utmost $1,545,000.

Now suppose the Central railroad to be completed to a point 16 miles west of Charlottesville, this is within 170 miles of the mouth of Greenbrier, with the Blue Ridge tunnel to go through, and the most favorable estimates ever yet made would warrant us in supposing that there was yet required $20,000 per mile for this whole distance, or $3,400,000. Deduct the distance and cost of a road between Christiansburg and the mouth of Greenbrier, and it will be evident that the State must make 92¼ miles more of new road, and spend $1,855,000 more money to construct this road, than would be required to accomplish the very same object by the line through Lynchburg.

In this comparison, the Central railroad has received the benefit of the lowest estimates ever made by any one for it. Major Walter Gwynn, Chief Engineer of the James River and Kanawha canal company, has expressed the opinion in his late report, that it will cost a great deal more. It may be added that the gauge of track on the Lynchburg route gives it a great superiority over the other, and that all of the one is laid with a substantial rail, while most of the distance between Richmond and Charlottesville is laid with a plate rail.

It seems therefore, that though the Central road may be valuable as a local work, and may, in that light, deserve the patronage of the State, there can be no question as to the best route, from the valley of New river to Richmond, being through the Virginia and Tennessee railroad. This question, after all, is of far greater importance to the State at large, and especially to tide water and the country between the mouth of Greenbrier and the Ohio river, than it is to the Virginia and Tennessee railroad company. These distant sections of the State have a deep and vital interest in securing their union by the most certain and efficient method that can be adopted.

To complete this scheme, the road from Petersburg to Norfolk should be finished. Then the road should be extended down the valley of the Kanawha to a point below the mouth of Coal river—thence one branch should extend to the mouth of the Kanawha, continuing across the Ohio river to Chillicothe, where it would intersect the great Cincinnati and Belpre road. Another branch should go to Guyandotte, and be extended to meet the line of roads running from Louisville through Frankfort, in that direction.

It has been asserted that a railroad from Cincinnati to Richmond could not compete with the Baltimore and Ohio road, because the latter is the shortest by a few miles. The distance from Cincinnati, by way of Parkersburg and the railroad, to Baltimore, is 580 miles. The distance by the Virginia Central road, to Richmond, is 600 miles—by the Virginia and Tennessee road, as was shown, the distance is 7¼ miles less, leaving only 12¼ miles in favor of Baltimore. If we apply to this case the rule generally used for assigning to a certain amount of ascents and descents on a road, the equivalent in distance, we will find the route by Lynchburg to be very greatly the shortest. On the Baltimore and Ohio railroad, there is one continuous grade 12 miles long, of 116 feet per mile. There are many other grades on that road less than this, but still much higher than those on the Virginia and Tennessee railroad. On this road, as before stated, the limits are 60 feet per mile in one direction, and 68 feet in the other. This would give an incalculable advantage to our line. The Baltimore and Ohio railroad company have tried to obviate the difficulty of these high grades by the use of heavy engines which crushed their track rapidly. The laws of gravity are stubborn facts, which can neither be removed nor overcome. Other things being equal, the expense of transportation on a road will be in proportion as that road approaches or departs from a level. To give a clear idea of the rapid decrease of the effective power of a locomotive, as the grade increases, the following table is given, showing the net weight (in tons of 2000 lbs.), which can be drawn by a twenty-four ton engine, with eight driving wheels, on different grades, from a level to 120 feet per mile.

Grade per m.	Level.	10ft.	20.	30.	40.	50.	60.	70.
Weight.....	616	408	306	243	202	168	144	126
Grade per m.	Level.	10ft.	80.	90.	100.	110.	120.	
Weight.....	616	408	112	100	90	82	74	

Some idea may be formed of the relative cost of transportation over different grades by a glance at this table. The effective power of a locomotive on a grade of 68 feet per mile, is nearly 70 per cent greater than on one of 116 feet per mile. It is clear, therefore, that if Virginia constructs the best road that can be made from the Ohio river to Richmond, and the other Chesapeake markets of the State, that road can compete successfully with the Baltimore and Ohio road for tonnage. But it is of vital importance that Virginia should avail herself of every advantage that nature has given her in such a close contest. With regard to travel, much of it will follow the tonnage; but that which leaves Cincinnati or Chillicothe for Baltimore and points north of it, will not come through Richmond. To apply the above table, in a comparison between the Central and the Virginia and Tennessee railroad, taking 105 feet per mile as the ruling grade on the one, and 68 feet as the ruling grade on the other, it will be found that the locomotive would draw a net weight on the Virginia and Tennessee railroad, about 51 per cent greater than it could draw on the Central railroad.

Mobile and Ohio Railroad.

An abstract of the remarks of Capt. J. CHILDE, Chief Engineer of the Mobile and Ohio railroad, delivered at Nashville, Tennessee, in the Representative Hall, on the 22d November, 1851.

Capt. Childe said that nature has established in the existing variety of soil, climate, and products of the valley of the Mississippi from the Gulf to the lakes, a division of industrial interests, which strongly invites the people of that valley to institute a perfect and corresponding division of manual labor; by the introduction of the mechanic arts and manufactures, for which their coal, iron, cotton, hemp, flax and unlimited supply of bread stuffs are a sure pledge of success. Commerce depends for success upon the natural and manual divisions of labor, whilst internal improvements serve to concentrate population and capital, until these divisions are made most perfect and productive to both. To extend these improvements therefore, in advance of sufficient settlements and trade to justify their construction, and pay interest upon their cost, for the purpose of building towns, selling wild lands, or of crossing 2,000 miles of uninhabited country to look at the Pacific Ocean, is a delusive and speculative indulgence, both wasteful, and subversive of the first principles of political economy, which require concentration of labor and capital, so long as the wages of human skill and industry can be advanced, and thereby the population, wealth and power of the present States of the Union promoted. Rivers, canals, and steamboats have made wonderful developments in this western world; but the introduction of railways as co-laborers better fitted by speed and safety, for passenger and light merchandise traffic, will stimulate productive industry and trade, to such an extent as to yield far more heavy tonnage, and of profit to steamboat and canal interests, than in other respects they divert therefrom. This is proved since the introduction of railways by the more extensive use and profit of canals, and steamboats, in England, of the New York, Ohio and Pennsylvania canals, of steamboats upon the Hudson, St. Lawrence, Ohio and Upper Mississippi rivers, upon the northern lakes and along the whole of our Atlantic coast. Everywhere their number and capacity are on the increase. Even the ocean steamers multiply for the trade of those sea ports especially, which are connected extensively with the interior by long lines of railway. The cities of the south cannot create commerce at their respective ports by building steamers or sailing vessels. It is the free, speedy, and daily connection with the producing millions of an extensive interior country that can give them a large and miscellaneous exchange trade. This connection secured by canals and railroads, then ocean vessels will come fast enough without our aid. In Europe and America under the influence of the economical principles above stated, upwards of 18,000 miles of railways are now in operation, and half as many more chartered and in progress of construction. As labor saving machines, they are unrivalled, producing to their owners a sufficient return for the capital expended, and to 120,000,000 of people who enjoy their use, a reduced cost of the labor performed, and of the commodities furnished them for consumption, concurrently with the demand of at least 100,000,000 of dollars per annum.

Railways are of two classes—the first class consists of long lines connecting the interior with tidewater, The second class of branch, or cross roads, for lateral and local purposes, but in most cases valuable tributaries to the first class lines, or to the rivers. The first class, or tidal lines, are vastly the most important to the prosperity of the country, and should receive the earliest concentrated efforts of the people in their construction. Both individual and public economy require that their course should be as direct as possible, length and grade reduced and cost moderate. These features can be attained for roads in the Mississippi valley in greater perfection than in any other part of the world, and ought not to be sacrificed to local, or speculative interests, which often seek to warp a line of road from its true course. Instances of this sort of influence are seen on many of the roads of the United States. The most prominent of which are, the New York and Erie railroad terminus, 25 miles above New York city, upon the Hudson river; the termini of the Baltimore and Ohio road at Wheeling, Va., and Mt. Clare, Baltimore, instead of Parkersburgh, Va., and at the water of the Bay of Baltimore, and the breaks in the line south of Washington, at Richmond, Petersburgh and Augusta.

The Mobile and Ohio road has been located entirely free from such derangements, consulting first of all the general good. 3500 miles of surveyed lines have been run to determine the route, lowest grades and least cost—

	Miles.
Its length in Alabama is.....	62¼
" " Mississippi is.....	273
" " Tennessee is.....	119¼
" " Kentucky is.....	39¼
Total main line.....	494¼
Length of branch to Tennessee river in Mississippi.....	15
Do. in Tennessee.....	8
Total main line and branch.....	517¼
The main line passes 4 miles west of Purdy, and through McNairy county.....	34 7-10
Corner Henderson county.....	1 8-10
" Madison (near Jackson,).....	31¼
" Gibson (near Trenton).....	29
" Obion county.....	22¼
Length from Mobile to Tennessee river.....	346
" estimated, from Tennessee river to Columbia.....	92
" from Columbia to Nashville.....	42
Total length, Mobile to Nashville.....	480

Thirty-three miles of the Mobile end of the road will be in complete operation by the 15th of February next. Forty-nine acres of ground for depots have been obtained at Mobile, with two wharves and right to run tracks through the commercial streets, that the cars may run to the warehouses or vessels of consignees. Vessels drawing 10 feet water are the largest that ordinarily come up to the city. All larger vessels anchor 16 to 25 miles below in the Bay, where there is 30 square miles of

water, 2 to 9 fathoms deep. On the bar between this anchorage ground and the Gulf, there is 20¼ feet water at mean low tide. On the bar at the South East Pass of the Mississippi river, there is at mean low tide 15½ feet. Difference in favor of Mobile Bay 4¼ feet. The Mobile and Ohio road will be extended to this deep water, and thus the cars brought along side of vessels of 40 per cent greater capacity than can get to New Orleans.—The export and import freights by these larger vessels will be cheaper, and relieved from all charges for lighterage, or towage. Vessels from the Atlantic ocean, the West India islands, or the Caribbean sea, will generally make Mobile bay a day sooner than New Orleans; and the exchange trade of Tennessee and Kentucky, with the southern and western portions of the globe, will thus prosper at Mobile bay, via the two arms of the Mobile and Ohio road. Whilst the same trade with Europe, and the North Atlantic States of our own country, will for like reasons thrive at Charleston and Savannah, via the Nashville and Chattanooga road. The great office of railroads is to liberate men, whenever desirable, from the obstructed natural channels of commerce, and by equalizing prices, supply and demand; break up the spirit of monopoly, domination and speculation of such cities as new York and New Orleans.

At the mouth of the Ohio it will connect with all the steamboats of the Mississippi and Ohio rivers, also with 1440 miles of railroads, at the bend of the Tennessee with the boats of that river, and thence by a central line of road, via Nashville, to Louisville and Cincinnati, with 1523 miles of railroads at Louisville, and 3500 miles of railroads at Cincinnati. Thus forming two great routes from the Gulf to the lakes; one ending at Chicago, the other at Cleveland, and connecting thence by railway with Baltimore, Philadelphia, New York and Boston. These two routes traverse 10½ degrees of latitude, and connecting with steamers to Lake Superior on the north, to the Caribbean sea on the south, will form a quick transit for passengers and for the interchange of the various products of 38 degrees of latitude; from Chagres and Trinidad to the north shore of Lake Superior, and thus create and stimulate an external and internal commerce far greater than can be promoted by the river channels alone.

The middle ground of this internal commerce will be central, and Western Tennessee, where are combined the staple products of the south and north, with a temperate and healthy climate, water power, rich soils, iron, coal, beautiful marbles, limestone, and a variety of valuable timbers; all that can be needful for the prosecution of the mechanic arts and manufactures, except a system of railways, by which the products of all branches of industry within the State can be distributed north, east. south and west, and spread broad-cast for general consumption. The first class roads that will most perfectly form this system, are the two north and south routes above named—the Nashville, Chattanooga and Western—the Charleston and Memphis, and the Eastern Tennessee and Virginia lines. These five roads severally invite the aid of the State to the extent of furnishing the iron and machinery when the people shall have provided for or executed the local work of grading, etc.—They are all long lines, (650 to 1000 miles,) drawing the trade of other States into and through Tennessee, and cannot fail to be eminently successful; while second class short roads, for local purposes, as branches to these long lines, or as tributaries to rivers, may fail to be profitable, and should be let alone until the long lines are completed; they will then, by the increasing prosperity of the people, and the aid of the long lines, come into existence as naturally and fruitfully as branches grow from trees.

New York, Massachusetts, Pennsylvania, Maryland, Virginia, North Carolina and Georgia have severally assisted their citizens in building long first class routes, either by a subscription of stock, a bonus, a loan of credit, or by separately building the more difficult portion of the work, and with satisfactory results.

By the road from Mobile to the Tennessee and Ohio rivers, and by the other railroads connecting therewith, the following distances and running time of trains will be found nearly correct. From Mobile.

	Miles.	hours of time. Freight.	Passeng.
To Jackson, Miss.,	221	20	9
" Vicksburg, "	268	23	11
" Bend of Ten. river	346	29	15
" Memphis, Tenn.,	128	36	18
" Jackson, "	384	32	16
" Trenton, "	409	34	17
" Columbia, "	432	36	18
" Nashville, "	480	40	20
" Huntsville, Ala.,	450	38	19
" Mouth of Ohio, R.,	494	41	20½
" St. Louis, Mo.,	775	65	33
" Louisville, Ky.,	700	59	30½
" Cincinnati, Ohio,	800	68	34
" Cleveland, "	1056	90	45
" Chicago, Illinois,	875	74	36½
" Baltimore, Md., via Nashville and Cincinnati,	1445	144	62

The total estimated cost of the Mobile and Ohio railroad, including the branch to Tennessee river, is ten millions of dollars, of which five millions is for local works, and five millions for iron rails, chairs, spikes, cars and engines. The local work on 127½ miles in Tennessee is one million and sixty thousand dollars; for iron rails, etc., as above, one million thirty-five thousand dollars.

Average cost per mile of local work	$8,313
" " " " of rails, etc., at the present prices of iron,	8,120
To build the whole road in three years, the present subscription of Mobile furnishes—	
For local work	$600,000
The new tax law do.	1,100,000
Present subscription of Miss., do.	1,000,000
To be obtained in Mississippi, this winter, after the company law is altered, dividing the stock among the tax payers.	740,000
Present subscription in Tenn.	150,000
To be obtained in Tennessee	910,000
" " in Kentucky	500,000
Total	$5,000,000

In this sum are included $50,000 and $100,000, respectively, for depots at the Tennessee and Ohio rivers.

The rates of charges for passengers and freights on the Mobile road, will incline to the low fare system. For passengers 2 to 3 cents per mile; for heavy, low priced products of fields, forests and mines, and groceries, 1½ to 3 cents per ton per mile; for merchandise generally, 3 to 5 cts. per ton per mile; for cotton from Tennessee to Mobile, 1,-50 to $2,50 per bale.

With fixed rates of transportation, and the prices current received each day by the passenger trains from Charleston, Mobile and New Orleans, the merchants of the interior can buy the entire crops of the country without risk; sending on one purchase after another for quick sale—import their own goods—and, in buying and selling constantly, in both directions, turn a profit on their capital twelve times a year. Tidal railways are the virtual extension of the city wharves throughout the land, and enable the merchants (of Nashville, for instance) to import and export for the country around with great facility.

By the time the Mobile road can be completed to the Tennessee and Ohio rivers, low pressure steam packets, built for passengers alone, will be prepared to run in connection with the road from New Orleans to Mobile, and from St. Louis and Louisville to the Ohio terminus. The latter will be long, light and swift, drawing so little water as to run in the lowest stages of the rivers. By such packets, and the railroad, passengers can be conveyed in safety from St. Louis to Mobile in 36 hours, for $12; from Louisville to Mobile in 47 hours, for $13; and from Mobile to or from New Orleans in 12 hours for $3.

When the route from the bend of the Tennessee to Louisville and Cincinnati shall be completed, connecting with the Chattanooga road at Nashville, the Southern travel of Louisville and Cincinnati, and of the 5,000 miles of Northern and Eastern railroads which center at those cities, will come via Nashville. But before this shall be done, the Mobile road cannot fail, by its junction with the Tennessee, Ohio and Mississippi rivers, with the central Illinois road, and thereby, with the traffic of the railroads and lakes of the North, to have an immense business. The ease and safety it will afford for people to escape in winter, in a few hours from the cold blasts of the North to the temperate breezes of the South, or in summer, from the heat and sickness of the South, to the bracing airs of the North, will enlarge its travel, both *through* and *way*, beyond any present calculation. Based, however, upon low rates, upon one-third of the passengers that now pass annually up and down the Mississippi river to and from the Northern States, and upon carrying way passengers equal to one-third of the white population of the country adjoining the route, which is the first average experience of other railroads of our country, we shall have the following direct income, viz:

From 125,000 through passengers, at $8	$1,000,000
From 110,000 way-passengers, at $2,	220,000
" through freights of merchandise, live stock, bread stuffs, &c.	842,000
From way freights of do. do. do	738,000
" United States mails	90,000
Total income,	$2,890,000
From which deduct all expenses for depreciation of tracks, repairs, and working the roads	1,445,000
Total nett earnings	1,445,000
From which pay interest on five millions loan, 7 per cent., including exchange	350,000
Pay for additional cars, engines, side tracks, and buildings for increasing business	200,000
Pay 15 per cent. dividend on stock for local work of $5,000,000.	750,000
Total for interest, construction, and dividend	$1,300,000
Leaving a surplus for contingencies or sinking fund of	145,000

The relation of the Mobile road to New Orleans is one of deep interest to the people of that city.—After comparing very complacently their own position and power with those of their neighbors at Mobile, they naturally concluded, as they had once tried and failed to build a road to Tennessee, that Mobile could only dream of constructing one to the Ohio river. But notwithstanding her incredulity, Mobile persevered in the work, and in two years from the commencement of the surveys, public sentiment pronounced it sure to succeed.—Whereas, New Orleans takes the field, without charters, surveys, or stock subscribed, lectures the people of Mississippi and Tennessee upon their several interests, and upon her own natural but aqueous rights, and calls upon them to come up in January next and give an account of their doings.

Now, the spirit of domination, of frightened monopoly, or of rivalry, indicated by this unsubstantial movement, places New Orleans in a false position, unjust to herself and to her neighbors. Why should she seek to divert the attention of the people from the Mobile and Ohio road, by declamation and airy promises, two years at least before she can by legal authority and surveys lay a specific plan before them for a road to New Orleans? Mobile can have her road done by the time New Orleans gets fairly into the field, and it will be conveying passengers between the Ohio river and N. Orleans, via Mobile, in one third of the time now required by the river. She therefore, should stand its friend, and not as an enemy. The people *must* have better avenues to market than by the river channels, which are never right when most needed; and however much a general convention may help to draw out the latent energies of New Orleans, it never can satisfy thinking men that two or three markets within reach are not better than one. Yet much important information will be elicited by it, a few items of which I here submit for the consideration of the people of North Mississippi, Tennessee, and Kentucky, showing where is their shortest and cheapest route to tide water. The

bend of the Tennessee river and its vicinity presents some attractions for three long lines of road, Charleston and Memphis; Mobile, Nashville, Louisville and Cincinnati and Mobile and Ohio. May not New Orleans desire to connect herself to these roads in the same vicinity? And if so, what will be the comparative distances to New Orleans and Mobile?

Route across lake Ponchartrain, from bend of Tenn	428 miles.
From do. to Mobile,	346 "
Difference	82 "
And two transhipments	
Route west of lake Maurepas,	455 miles.
To Mobile as before,	346 "
Difference	109 "
Route via bank of Mississippi, and river Amitie,	473 miles.
To Mobile as before,	346 "
Difference	127 "

New Orleans is 110 miles from the Gulf; Mobile, 33; 77 miles difference. Add this to the above differences, and 159 to 204 miles (according to the route taken for the New Orleans road) will be the greater distance from North Mississippi, Tennessee, and Kentucky, to the Gulf, via, N. Orleans.—Will the interior planting and commercial interests willingly pay the expenses of this extra distance upon their exports and imports? But the position of New Orleans, with ten thousand miles of navigable rivers, and five hundred steamers pouring the products of six millions of people into her lap, is superior to any other city on the globe, especially, as these six will rapidly swell into sixty millions and send *her* the greater portion of the products of one and a half millions of square miles.—Thus situated, can N. Orleans envy Mobile, Charleston or Savannah, or any other section of country, that strives to better its condition by artificial channels of trade? No. She will not so dishonor herself. Let her rather enter the same sphere of enterprize. This field is wide before her—too wide for petty and contemptible jealousies.

The "gauge" of a railroad is the width between the rails of the track. When two roads come together, differing in gauge, the cars and engines of one cannot pass upon the other, and transhipment of goods and passengers must be made. The Mobile road guage is five feet, the same as the Chattanooga road. All roads within the State of Tennessee should be required by law to adopt the same; that cars from Charleston, Mobile and New Orleans, can run to any and all ports of the State. The lines hence to Louisville and Cincinnati should also be same.

Let any man review this matter with the United States map before him; trace the Mobile and Ohio road to the Tennessee river; its two great arms through west and central Tennessee, and its connecting lines North, East, and West with all the large cities, and rivers of the Union, and he cannot avoid the conviction, that it will command more business, and revenue in proportion to length, than any other road in the Western World. Not forgetting at the same time, that the donated lands from the United States, will, when sold, pay 40 per cent. of its entire cost.

Ohio and Mississippi Railway.

The Board of Directors of the Illinois company having in charge that portion of the railway from Cincinnati to St. Louis, that lies between the latter city and Vincennes, have just closed a laborious session at St. Louis. Some of the results of their labors are given in the St. Louis Republican. The right of way has been relinquished by all the owners of land along the line with few exceptions, and these mainly because of some legal disability. The probable cost of these relinquishments will not exceed three thousand dollars. The people appreciate the benefits of the road, and freely give the right of way, and in some cases denote the ground required for stations. The route adopted is from Illinoistown to Careyville, Lebanon, Carlysle, Salem, Olney, and Lawrenceville to Vincennes, as surveyed by E. Gest, and by him recommended as the best, shortest, and cheapest route. This location is said to be satisfactory. Sydney Breese has been chosen a Director in the place of B. Bond, resigned. The Republican expresses its gratification at the decision and promptness of the directors, in taking the necessary steps to get the road fairly under way at the earliest possible period. The people along the line being now satisfied that the road will be built, will lend it a helping hand.—*Cin. Gazette.*

Railroad Convention.

At a meeting of delegates appointed by the several counties of Christian, Hopkins and Henderson, and the city of Evansville, Ia., convened on the 8th of Nov., 1851, at Madisonville, Ky., for the purpose of adopting such measures as are best calculated to forward the construction of a railroad from Henderson to Nashville, Samuel Woodson, Esq., was elected President and C. M. Pennell and John C. Noble were appointed Secretaries.

On motion, John Ingle, Esq., and Hon. James Lockhart, of Evansville, Ia., Dr. F. G. Montgomery and J. P. Campbell, of Christian, John P. Cook, Esq., and J. F. Wilkins, of Hopkins, and Dr. Wm. Brewster and R. G. Beverly, of Henderson, were appointed a committee to draft and present resolutions for the action and adoption of this meeting.

During the retirement of the committee, Col. E. H. Hopkins, by request, addressed the meeting in a forcible speech, showing the great natural resources of the country through which the road is to pass, and the importance of constructing this link to complete the great chain of railroads from the extreme north to the extreme southern limits of the country. At the conclusion of said speech, the committee on resolutions reported the following, which after being ably discussed by Messrs. Ingle, Lockhart and others, were adopted unanimously:

Resolved, That the early construction of the Henderson and Nashville railroad is necessary to the future prosperity of Southern Kentucky, and to preserve her relative position in the state amongst the surrounding communities, and that by concert of action in the towns and counties through which it is to pass the prospect is, in the opinion of this convention, entirely practicable.

Resolved, That as one link in a chain of railroads connecting the Northern lakes with the Southern and southeastern cities and the seaboard, this road when built, cannot fail to be a main arter of trade and travel, and one of the best paying roads in the country.

Resolved, That the commissioners appointed by the charter passed at the last legislature of Kentucky to open books for the subscription of stock in said road, be requested to use every effort to secure a sufficient subscription of stock for an early organization of the charter.

Resolved, That said commissioners be requested to take the necessary steps, by public speeches, circulars, or otherwise to lay statistical information before the people interested in the enterprize.

Resolved, That Col. E. H. Hopkins, James Alves and Dr. Wm. Brewster be, and they are hereby appointed a committee to procure the necessary legislation by the Kentucky Legislature now in session, to enable the counties, towns, and other corporations to subscribe stock in said road and to provide means for the payment of such stock; and that they also procure from the legislature of Tennessee, now in session, the necessary legislation for the construction of the said road from the Kentucky State line to the city of Nashville.

Resolved, That Dr. F. G. Montgomery, Dr. Wm. Miller and C. M. Pennell be, and they are hereby appointed a committee to procure the services of one or more gentlemen to canvass the counties between Henderson and Nashville in favor of the construction of said road; and that we recommend to the several counties the appointment of four speakers for each county to co-operate with the speaker or speakers selected by the committee.

Resolved, on motion, that the banks of this convention be tendered to the Chairman for the able and impartial manner in which he has presided over its deliberations.

Resolved, on motion, that the American Railroad Journal, and the several papers published at the city of Evansville, Ia., Russelville, Henderson, Hopkinsville, Clarksville, and Nashville be requested to publish the proceedings of this meeting.

The Convention then, on motion, adjourned *sine die*.

SAMUEL WOODSON, Ch'n.

C. M. PENNEL, J. C. NOBLE, } Secretaries.

Ohio and Pennsylvania Railroad.

The portion of this road between Salem and Alliance, a distance of thirteen miles, was opened for public use on Thursday, the 27th ult. The citizens of Salem got up a very spirited celebration on the occasion, and invited the officers of the company to a supper in the town hall, at which speeches were made by Gen. Robinson, the President, Mr. Roberts, the Chief Engineer, and others. The arrival of the passenger cars at the station in Salem was greeted by a very large concourse of people, and as many as the cars could carry, including a large proportion of ladies, were afterwards treated to a ride to Alliance and back. No accident occurred to mar the pleasure of the day, which will long be remembered in the annals of Salem.

The cars now run regularly, leaving Alliance at 8 o'clock, and Salem at 9 in the morning.

The express train between Pittsburg and Enon, runs with great regularity, and carries a large quantity of passengers. In about a week the cars will run to Palestine, 49 miles from Pittsburg.

Notwithstanding the unfavorable weather, the track layers are rapidly filling the gap in the line, which is now supplied by stages; and before the close of December we expect to have a continuous line of railroad from Pittsburg to Cleveland.—*Pittsburg Gaz.*

Illinois.

Central Military Tract Railroad.—The line of this road extends from Clayton, on the Northern Cross road, from Springfield to Quincy, to the line of the Rock Island road, in Burea county, a total distance of about 125 miles. It will constitute, in connection with the Rock Island road, a very direct route from Quincy to Chicago. The first division of the road from Galesburg, on the route of the Peoria and Oquawka railroad, to the Rock Island road a distance of fifty miles, is to be let on the 24th instant.

In speaking of this project the Chicago Tribune says:—

The whole of the Central Military Tract railroad will traverse the high table lands between the Illinois and Mississippi rivers, equi-distant from those streams, and will open up a channel of commerce through one of the most fertile and otherwise highly favored portions of the State. As a feeder to the Chicago and Rock Island road, with which it will connect west of Peru, and as furnishing another channel of communication to the Mississippi river (at Quincy), this road is of great importance to Chicago, and furnishes another to the already numerous sources of the vast tide of commerce which is to centre here.

South of Galesburg the people are moving in this matter, and doubtless before the road is completed to that point, the means will have been secured to continue it to Clayton, at which place it will connect with the Northern Cross railroad. On the 6th and 7th inst., meetings were held in Macomb, McDonough county, at which, addresses were delivered by some of the most influential citizens of middle Illinois, among whom were C. A. Warren, R. S. Blackwell, B. R. Hampton, James M. Campbell, Esqrs., and Gen. Darnell. The following resolutions introduced by W. T. Head, Esq. of Macomb, were unanimously adopted:

Resolved, That we regard the proposed railroad from Galesburgh to Clayton, as the most eligible route for a road, and more beneficial than any other enterprise that could at this time elicit the energies and means of the citizens of McDonough county.

Resolved, That we will in every way encourage the commencement and completion of the road by all the means at our command.

Resolved, That the growing prosperity of McDonough and adjacent counties now require as a

means of transportation of the increasing surplus of the country, a railroad from the town of Galesburg to the town of Clayton.

Resolved, That this meeting respectfully request the county court, of McDonough Co., to cause to be submitted to tho people of said county by an election at some convenient and suitable time, the question whether they will vote a tax for the purpose of subscribing $50,000 to the proposed railroad from Galesburg to Clayton.

American Railroad Journal.

Saturday, December 13, 1851.

Illinois Central Railroad.

The recent survey of this route makes the whole length of line to be built 699 miles, of which will be straight line, 626.77 miles, of radii from 1,500 to 2,000 feet, 5.40 miles; of radii from 2,000 to 3,000 feet, 12.28 miles; of radii from 3,000 to 4,000 feet, 24.26 miles; of radii from 4,000 to 5,000 feet, 15.66 miles; of radii over 5,000 feet, 14.63 miles. Showing about 10 per cent of curved lines, and these mostly of large radii.

The gradients are as follows: Level, 238.29 miles; ascent less than 10 feet per mile, 113.60 miles; ascent from 10 to 20 feet per mile, 118.19 miles; ascent from 20 to 30 feet per mile, 89·05 miles; ascent from 30 to 40 feet per mile, 132.48 miles; ascent of 42 feet per mile, 7.50 miles. Total, 699 miles.

The 42 feet grade occurs in ascending the Fever river, from Galena east to Scales Mound.

Mr. Mason estimates the cost of the whole road with the equipment at $16,537,212. His estimates include the following items, viz:—21,428,523 cubic yards embankment. 369,951 cubic yards rock excavation; 222,206 cubic yards masonry; 10,228 feet bridging, etc., etc.; 735 miles superstructure, rails, etc.; 40 passenger stations and houses. 40 freight stations and houses; 70 locomotives and tenders; 70 passenger cars; 20 baggage cars; 700 box freight cars: 600 platform cars; 200 cattle cars; and also right of way, land and damages, fencing and engineering expenses, engine houses, machine shops, woodsheds, water tanks, tools and machinery for shops, and furniture for station houses, etc.

The company estimate the value of their land, granted by Congress, at $18,150,000. They propose to issue bonds to the amount of $17,000,000, based upon the lands and a mortgage of the road. The estimated net income of the road is put down at $1,774,252, equal to 7 per cent upon about $26,000,000.

If the above estimates are correct, the project will prove a very good speculation to those who have control of it. They get a bonus of $26,000,000 for building the road, which we presume will be at least $1,000,000 to each of the persons now interested. The bounty of Congress will inure, as it generally does, to those who have wealth to control its direction. The course that the Illinois grant has taken, will, we fear, prejudice the claims of more deserving companies, for aid for similar projects.

But there is anothe view of the case. The company wish the *public* to furnish the means necessary to build the road, while *they* pocket the profits. What if the pubic should not take these bonds, will the company go on with the work with their own means? They have shown no disposition to commit themselves to any considerable amount, until they see how their negotiations in the hands of Mr. Walker are to terminate.

We have no means of forming any opinion as to the probabilities of Mr. Walker's succeess, than those furnished by the precedents of similar cases. Foreigners do not like to buy our chickens in the egg. They are unwilling to assume the risk of the proper application of the money necessary to build railroads, which are 3000 miles off, and over which they have no control. After our roads are completed a sufficient time to make a good show of earnings, they are willing to take hold *sparingly*, but even then, they do not wish to invest large amounts in one line. We must add to this the fact, that John Bull, is the least inclined of all European nations, to take our railroad securities. He has already lost $500,000,000 in railroads at home.—And it will be difficult to convince him, that we manage any better, or that we shall be more successful. Illinois is an unfortunate field in which to invite him to a feast, after all the losses the English capitalists have sustained there. He will be very likely to insist that the old score shall be made good before he will lend any more to new projects. Our best bonds of finished roads are not popular in England. This being the case those of proposed lines will hardly sell at any rate. The Germans and French have much more confidence in our railroad securities and they take most of those sold on foreign account.

The above are our reasons why we are inclined to believe that Mr. Walker will not succeed. But he may, notwithstanding, he is an able man, and popular in England, and the best that could be sent upon such a mission. If he succeeds the road will move ahead. If not, what will become of the projects. *nons verrons.*

We believe that the company committed a serious blunder in the outset. Before they went into the market to borrow money, they ought to have commenced work, and by so doing, to have shown *their* confidence in the enterprize, by investing a large amount of their own money. Other companies can obtain money upon no other terms.—Capitalists base their confidence in our enterprize, mainly, upon that displayed by those in charge of it. If those immediately interested are willing to risk nothing, but little can be expected from those that are not. If the Illinois Central Co., had but completed 100 miles of railroad, they would have found no difficulty in borrowing sufficient to build 100 miles. They will find it a much more difficult task to borrow for the first hundred,

We knew nothing of their affairs. They may have already secured the loan, notwithstanding our doubts, to the contrary. We hope to see the road built. It would prove a most useful work to the country. Upon this ground we did all we could to effect the passage of the bill to which secured the magnificent gift of 2,500,000 acres of land; though we will confess, that our co-operation to this end would have by no means been so hearty, had we foreseen the that it would probably conduce much more to private aggrandizement, then to public good.

Air Line Railroad.

We are happy to learn that $1,000,000, the sum required to commence work on this road, have been subscribed. This secures its completion beyond a doubt. Operations will be commenced at once, and will be vigorously pushed forward till the road shall be completed.

The above is very gratifying intelligence. The Air Line railroad, after a long series of trials and defeats, has reached a point where success may be regarded as a fixed fact.

Virginia and Tennessee Railroad.

We give in another column such portions of the recent report of the Chief Engineer of this road, C. F. M. Garnett, Esq., as is of especial interest to the public. We are gratified in being able to give so favorable an account of the progress of this important work, in which so large a portion of the country is interested.

It will be seen that the company propose to contruct a branch from their line to the mouth of the Greenbrier river, on the Kanawha. They claim that their route is the shortest and best in Virginia, by which the mountains can be crossed.

The gauge of the Virginia and Tennessee railroad is 5 feet, to adapt itself to the gauges of the roads in Georgia, Alabama, Mississippi and Tennessee. The 5 feet gauge is as universal at the south as the 4 feet 8½ inches is at the north.

Illinois Central Railroad.

It is confidently reported that the last steamer brought intelligence that Mr. Walker is likely to succeed in his mission. It is stated that the loan will be taken by the Rothchilds.

Canada.

The government, or railroad party, have triumphed in the recent elections in Canada. Hon. John Young, the leading internal improvement man in the Provinces, and known to favor the Halifax scheme, has been returned from Montreal, which is a favorable indication for that project.

We regard the success of this road as certain, so far at least as obtaining the money is concerned.

Stock and Money Market.

We have but little alteration to note since our last. Money is sufficiently abundant for all ordinary business operations, but scarce for purposes of speculation, and is obtained with difficulty for unfinished works. The bonds of roads in operation, and which make a good show of earnings, are in demand to a considerable extent for investment on foreign account. Our best customers abroad are the Germans and French, who are investing largely in our best securities.

Western securities are attracting the most attention, from the low price at which they are selling, and the confidence felt in their rapid rise after the roads shall have been in operation a sufficient length of time to illustrate their capacity for business. We believe that every western road now in operation has been completely successful, and that their stocks and securities have advanced regularly and steadily in this market, from the period of their first sales. Purchasers, in addition to securing a good interest on their investments, have realized a handsome premium by the rapid advance of their securities.

Railroad companies will find it to their interest not to force their bonds upon the market before the opening of their works. Where a road is completed, the purchaser can estimate the value of his security; but if he invests where the work is in progress, he, to a certain extent, is obliged to guarantee the faithful application of the money, after it has passed from his control.

We have become so accustomed to the exportation of specie, that the shipment of large amounts has ceased to excite much alarm. Our exports last week exceeded $2,500,000. They will be very small this week.

On the whole, we regard the prospects ahead as favorable. We believe that most of our roads in progress will be able to borrow on not very exhor-

bitant terms, sufficient means to carry forward their works. Money will continue to command a high rate of interest, but it can be had for all legitimate enterprises.

The receipts of Morris canal, for week ending 29th ult., being 34th week of 1851, were	$2,443 33
Same week last year	2,704 65
Decrease 34th week, 1851	$261 32
Total receipts to above date, 1851	108,849 02
Do. do. 1850	95,813 38
In favor of 1851	$13,035 64
The amount of coal transmitted by the Deleware and Hudson Canal Co., from Nov. 29 to Dec. 8, was	23,080 tons.
Quantity previously received	768,020 "
Total	191,100 "
Received during the season of 1850	543,353 "
Increase this year	247,747 "

Cleveland, Columbus and Cincinnati Railroad.—A cash dividend of four per cent. on the capital stock has been declared for the last six months.

Receipts for November, $57.264 11. For six months ending December 1st, $343,501 34.

Number of passengers arrived over the road, 101,732.

The annexed table shows the foreign Imports and Exports of specie and bullion since 1821. In 1850 and 1851 the receipts of gold dust from California were considered as domestic imports, and are not included in the statement below.

Year.	Imported.	Exported.
1821	$8,064,890	$10,478,059
1822	3,369,846	10,810,180
1823	5,097,896	6,372,987
1824	8,379,835	7,014,552
1825	6,050,765	8,797,055
1826	6,880,966	4,764,533
1827	8,151,130	8,014,880
1828	7,489,741	8,243,476
1829	7,403,612	4,924,020
1830	8,155,964	2,170,773
1831	7,305,945	9,014,981
1832	5,907,504	5,656,340
1833	7,070,368	2,611,701
1834	17,911,632	2,076,758
1835	13,131,447	9,477,775
1836	13,400,881	4,324,336
1837	10,516,414	5,976,249
1838	17,747,116	3,503,016
1839	5,595,176	8,776,743
1840	8,882,813	8,417,014
1841	4,988,633	10,034,232
1842	4,087,016	4,813,539
1843	22,320,335	1,520,791
1844	5,830,429	5,454,214
1845	4,070,242	8,606,495
1846	3,777,732	3,905,268
1847	24,123,289	1,907,738
1848	6,360,424	15,841,620
1849	6,651,240	5,404,648
1850	4,628,792	7,522,994
1851	4,967,901	29,231,880
Total	$268,417,774	$222,621,923

Excess of imports, $45,795,851. To this should be added about $40,000,000 received in two years from California.

The tolls on the Delaware canal at Easton, for the year ending 30th November, were $204,352, against 173,650, same time last year.

Columbia Railroad.—The following table shows the collections at this office:

Amount as per last report	$358,243 13
Amount to 30th November, 1851	34,521 51
Whole amount since 30th Nov., 1850.	392,764 64
Same time last year	359,647 18
Increase	33,117 46

United States Mint.—The annexed statement shows the operations of the United States Mint, at Philadelphia, for November:—

Gold.	Pieces.	Amount.
Double Eagles	228,217	$4,564,340 00
Eagles	24,640	246,400 00
Half Eagles	38,256	191,280 00
Quarter Eagles	105,404	263,510 00
Gold Dollars	216,079	216,079 00
Total	612,596	$5,481,609 00
Silver.	Pieces.	Amount.
Half Dollars	12,000	$6,000 00
Quarter Dollars	62,000	15,500 00
Dimes	137,000	13,700 00
Half Dimes	60,000	3,000 00
Three Cent Pieces	500,200	15,006 00
Total	1,384,296	$5,534,865 00
Copper.	Pieces.	Amount.
Cents	193,124	$1,931 24
Total	1,577,420	$5,536,796 24

Gold bullion deposited for coinage from 1st to 30th November, 1851, inclusive:

From California	$5,390,000
Other sources	60,000
Total	$5,450,000
Silver bullion deposited in same time	$20,800

A large supply of small gold coin remains on hand beyond demands of depositors.

Railway Share & Stock List;

CORRECTED WEEKLY FOR THE

AMERICAN RAILROAD JOURNAL.

NEW YORK DECEMBER 13, 1851.

GOVERNMENT AND STATE SECURITIES.

U. S. 5's, 1853	101¼
U. S. 6's, 1856	103½
U. S. 6's, 1862	110½
U. S. 6's, 1862—coupon	114½
U. S. 6's, 1867	116
U. S. 6's, 1868	115
U. S. 6's, 1868—coupon	122½
Land Warrants	140a145
Arkansas 6's	52a53
Alabama 5's	91a92
Indiana 5's	85
Illinois 6's, 1870	65a68
Kentucky 6's, 1871	104½a106
Massachusetts sterling 5's	105a106
Massachusetts 5's, 1859	100½
Maine 6's, 1855	103
Maryland 6's	102½
Michigan	—
Mississippi	—
New York 6's, 1855	103½
Ohio 6's, 1860	109
Pennsylvania 5's	91

RAILROAD BONDS.

Atlantic and St. Lawrence, 6 per cent	85
Baltimore and Ohio, 1867	94½
Boston and Providence 6's, 1855	101
Boston and Worcester 6's, 1855, convertible	107½
Bost., Concord and Mont. 6's, 1860, mortgage.	87½
Cheshire 6's, 1860	91½
Connecticut River 6's, convertible	89
Erie 7's, 1859	101
Erie 7's, 1868	106
Erie income 7's	94½
Hudson River 7's, 1853	101½
Michigan Central, convertible, 8's, 1856	104½
New York and New Haven	100½
Norwich and Worcester, mortgage, 1860	80a85
Old Colony, 1854	97½
Ogdensburg 7's, 1859	93½
Portsmouth and Concord	80a85
Passumpsic 6's, 1859	94½
Rutland 7's, 1863	90
Reading mortgage, 1860	78
" " 1870	70
Sullivan, mortgage 6's, 1855	67
Vermont Central 6's, 1852	90
" " 6's, 1856	85
Vermont and Massachusetts 6's, 1855	84

RAILROAD STOCKS.

[CORRECTED FOR WEDNESDAY OF EACH WEEK.]

	Dec. 10.	Dec. 3.
Albany and Schenectady	89½	95
Atlantic and St. Lawrence	60a65	—
Androscoggin and Kennebec	30a35	—
Boston and Maine	106½	105½
Boston and Lowell	108	109
Boston and Worcester	103½	103½
Boston and Providence	90	89½
Bost., Concord and Montreal	35	35½
Baltimore and Ohio	67½	—
Baltimore and Susquehanna	34	—
Cheshire	47	45
Cleveland and Columbus	—	—
Columbus and Xenia	—	—
Camden and Amboy	—	—
Connecticut River	60	—
Delaware and Hudson (canal)	99	100
Eastern	99½	99½
Erie	86½	87½
Fall River	97½	94
Fitchburgh	111½	110½
Georgia	—	—
Georgia Central	—	—
Harlem	68	67½
Hartford and New Haven	122	—
Housatonic (preferred)	—	—
Hudson River	70	70
Kennebec and Portland	50a55	—
Little Miami	—	—
Long Island	15	16½
Mad River	—	—
Madison and Indianapolis	90	93
Michigan Central	105	108½
Montgomery and West Point	—	—
Michigan Southern	—	—
Manchester and Lawrence	82½	—
Morris (canal)	14	14½
New York and New Haven	108½	108½
New Jersey	—	130
Northern	64½	68
Nashua and Lowell	104½	—
New Bedford and Taunton	108	—
Norwich and Worcester	53	55
Norfolk County	15½	15
Ogdensburgh	29	29½
Old Colony	66	65
Passumpsic	70½	72
Pennsylvania	—	—
Pittsfield and North Adams	95	—
Philadelphia, Wilm'gton & Balt.	29½	28½
Petersburg	—	—
Richmond and Fredericksburg	—	—
Richmond and Petersburg	—	—
Reading	59½	60
Rochester and Syracuse	111½	111
Rutland	40	43½
Stonington	51½	44
South Carolina	—	—
Syracuse and Utica	123½	—
Sullivan	15a20	—
Taunton Branch	108	110
Troy and Greenbush	90	—
Tonawanda	—	—
Utica and Schenectady	129	127½
Vermont and Canada	97	99½
Vermont Central	25½	26½
Vermont and Massachusetts	26	27½
Virginia Central	—	—
Western	104½	103½
Wilmington and Raleigh	56	—
York and Cumberland (Pa.)	19½	—

Georgia.

Waynesboro' Railroad.—It affords us pleasure to announce that the Waynesboro' railroad was opened on Monday last to a distance of fifteen miles. So much of it as is opened is represented to be the finest and best constructed road in the south. The remainder of it, it is presumed, will be equally well built. The work is now progressing rapidly, and the road will be pushed forward as speedily as possible to completion.

An arrangement has been made to run four-horse coaches in connection with the road, from the fifteen mile point to Augusta. This will take the mails and passengers through from this place to Augusta in 14 hours.—*Sav. Repub.*

Pennsylvania.

Philadelphia, Germantown and Norristown Railroad.—We learn from a recent report of the board of managers that this company have had a very prosperous business season the past year. The number of passengers for the year ending 31st October, was 506,501, an increase of 69,066 over last year. In every article of freight there has been a large increase, except coal. In that there has been a falling off, owing in a great measure to the destruction of the bridge at Conshohocken, in September, 1850, which rendered it impossible for much coal business to be done until February. The board expect that the coal business will be increased when the new bridge across the Schuylkill is finished at the lower end of Norristown. This bridge over which a track is to be laid will furnish the first good connection between the Norristown and Reading roads, and it is estimated that 20,000 tons of coal will pass over it the first year to supply Norristown and vicinity.

The receipts for the past year have been as follows:

From passengers on Norristown branch.	$63,436 90	
" Germantown "	31,637 00	
Amount from passengers		95,073 90
Freight on Norristown branch.	39,153 42	
" Germantown "	2,550 35	
Amount from freight		41,703 77
Amount from passengers and freight.		136,777 67
Sale of old materials	1,946 25	
Interest and rents	637 00	
		2,583 25
Total receipts from all sources		$139,360 92

In their last annual report the board estimated the revenue of the year at $130,000. Excess realised above estimate, $9,360 92.

Cash in bank, 1st Nov., 1850	$4,253 17	
Funds in hand of Con. Com	10,000 00	
		14,253 17
Total receipts, as above		139,360 92
Total available funds		$153,614 09

The total expenditures of the year have been $146,278 80, leaving a balance of $7,335 29.

The prospects of the road are encouraging. The receipts for 1852 are estimated at $152,500, and the total expense, $103,000, leaving $49,500 net income.

There have been two railroad companies incorporated and organised, for the purpose of constructing roads that will, when completed, form extensions of this road: the Chester Valley railroad company—the road to extend from Norristown to Downingtown, 22 miles; and the Chestnut Hill railroad company—the road to extend from Germantown to Chestnut Hill, 3¼ miles. The former is the old Norristown and Valley road revived, the grading upon which is about three-fourths done, and which it is estimated will require $350,000 to complete it. The latter road will cost about $80,000.

Both these roads would bring large additional business to this road, and prove highly advantageous to it.

STATEMENT OF LOAN AND STOCK OCCOUNT.

Amount of consolidated loan issued.	$272,500
Capital stock authorised by law	16,000 shares.
Amount of capital stock in circulation (par value $50, $788,050)	15,761 shares.
That may be issued by the company	239 shares.
Total stock and loan	$1,060,550

Missouri.

Hannibal and St. Josephs Railroad.—The commencement of work upon this great line of railroad took place at Hannibal on the 3d ult., with appropriate ceremonies. The event collected together a great concourse of people. The principal orator on the occasion was J. B. Crockett, Esq., of the St. Louis Intelligencer, who delivered a most eloquent and spirited address. The ceremony of breaking ground was performed by the President of the road, Col. R. M. Stewart, who prefaced the act by the following remarks:

Fellow Citizens:—I believe I speak the sentiments of all when I say that *this* is one of the brightest days in the history of the State. Strange as it may appear to those States which have observed our sluggish movements heretofore with disgust, and contemplated our tardy policy with contempt, and who have been accustomed to undervalue our vast resources, which have been lost sight of in our lack of energy and public spirit, nevertheless this is the second occasion of a like character which has been celebrated within the last six months; for, within that time, the enterprising co-workers in advancing internal improvements, have commenced the construction of a railroad west from St. Louis that the State will be proud of; and it is our wish that the Hannibal and St. Joseph railroad may merit equal favor in the high opinions of the people of the State of Missouri. Public spirit and enterprise are embarked in the two schemes, with a certainty of their being carried out and completed, and with full assurances that nothing will intervene, unless it might be that God should rend the earth asunder with an earthquake, to prevent its full consummation. I speak thus emphatically, because I know that the people of this State have manifested a determination to push ahead with unbounded energy in the work, and the declaration has gone forth from the lips of men in mighty numbers assembled, that it shall be accomplished. Yes, it shall be completed, whether the general government gives us what even-handed justice requires, by making appropriations of lands to aid in the work, as it has done to our sister States, or persists in that unjust policy which has compelled Missouri to stand back for the last quarter of a century.

Fellow Citizens: Missouri is able herself to build this road, even if other older States of the confederacy, which have been the special recipients of the favors of the general congress, do unite, and thus defeat the measures introduced for her just rights. I do not anticipate that our claims fail to meet with attention commensurate with their importance; but if opposition be made, we will rely on our own resources. We have burst the chains which have so long bound us, hand and foot, and have thrown off the shackles which have crippled our energies, and have taken the responsibility to speak and act for ourselves. It shall no longer be said that Missouri is behind the improvements of the other States of the confederacy, for we intend to make her what the God of Nature designed her to be—a most happy, peaceful and prosperous country.

The State has come forward nobly in the work, and extended her credit to aid in the progress of the enterprise. Through her liberality, a loan of $2,500,000 was authorised for its consummation. Already the requisite stock has been taken to secure both loans. The success of the enterprise is rendered premanent by a soil of unbounded fertility and the loveliest section of country, I was about to say, on the American continent. There is no country containing the same extent of territory which is capable of sustaining such an amount of population in full vigor as our State, and all we want to successfully establish the truth of our assertions in regard to the matter is, to open the avenue for carrying off our products. This road would be intersected at all points by numberless other rail and plank roads, to even the remotest in the States near to a good market; and such an avalanche of the riches of Missouri's soil will be poured into the Mississippi, to be borne on her quiet bosom to the ocean, and from thence carried to all parts of the earth, as will speak in tones which cannot be controverted, endorsing all which we claim for our State.

It is well known to our readers that the State of Missouri subscribes one-half of the cost of the two great lines of railroad—the Pacific, and the Hannibal and St. Josephs. Both of these roads are to run from the east and west lines of the State. The Hannibal and St. Josephs can easily connect on the east with the Northern Cross road of Illinois, and by this means be brought into direct connection with all the railroads of the United States, and constitute its line the great route of travel west.

The distance from Hannibal to St. Josephs is about 200 miles. The route traverses the finest portion of the State, and one of the best in the country. It is remarkably favorable for a railroad—much more so than that of the Pacific road. The country traversed is well settled, and its inhabitants, with State aid, can easily furnish the means for the construction of the road.

The amount of private and county subscriptions exceed $1,000,000. This carries an equal amount of State subscription, so that the immediate means of the company are $2,000,000, sufficient for all present purposes.

The company are indebted for the favorable position of its affairs mainly to the efforts of its able and energetic president, who has, to a great extent, been the life and soul of the project. It has now reached the point, from which future progress will be comparatively easy, and success certain. The project will come before the public under favorable auspices, and will undoubtedly receive the encouragement it deserves.

The directors of the company for the present year are, R. M. Stewart, president, John Corby, T. S. Talbot, R. I. Boyd, John Graves, G. A. Shortridge, Z. G. Draper, E. M. Moffett, R. T. Lakenan.

Railroads in the South.

There appears to be every indication, that a number of the Southern States, during the present winter, while their legislatures are in session, will commit themselves strongly in favor of some general system of internal improvement within their respective territories. The State of Tennessee has already lent her aid to two roads, the East Tennessee and Georgia, and the Nashville and Chattanooga. We believe that there is not much doubt that she will give to all her important lines now in progress and contemplation, the benefit of these precedents. The railroads of Tennessee cost much higher than those of any western or southern State, owing to the irregular surface of the country, and the difficulty in crossing the leading water courses. The amount of the aid to be furnished by the State, seems by general consent is to be limited to the cost of the iron, and in some cases the equipment. Should the State take up the leading lines, Tennessee will become the theatre of very active operations for some years to come.

We can see no objection to the adoption of such a policy. The State places herself in the light of a mortgage holding abundant security. With her endorsement, companies can sell their bonds at par. when without it, they could not probably obtain over 80 cents on the dollar, if they could sell them at any price. The difference is nearly sufficient to determine the character of a road as a paying project. There is another advantage resulting from a State becoming a party to railroads. Her securities go abroad and are the means of bringing capital into our country while the bonds of companies would have to be sold in our own markets, which add still more, to the high rates of interest which our companies are compelled to pay.

What we have said of Tennessee will apply equally well to the States of Alabama, Mississippi and Louisiana. Each of these are agitating some scheme to assist the railroads in progress and projected within their borders. All of them feel the necessity of acting in their collective capacity, in the prosecution of important lines that cannot be executed without such aid, and the present season probably will not pass, without the adoption by each, of some well digested plan to carry out a comprehensive scheme of internal improvements, suited to the wants of each.

Cotton, Woollen and Iron Manufactures.

The following is an official statement of the quantity of cotton, wool and iron consumed in the United States during the past year, together with the value of the raw material consumed, number of hands employed, and value and quantity of the article manufactured:

Cotton Goods in the United States.

Capital invested	$74,501,031
Bales of cotton used	609,117
Tons of coal consumed	121,099
Value of all the raw material	34,835,056
Hands employed	102,287
Value of entire product	61,869,184
Yards of sheeting etc	763,678,407

Woollen Manufactures of the United States.

Capital invested	$28,118,650
Pounds of wool used	70,862,829
Tons of coal	46,370
Value of all the raw material	25,755,988
Hands employed	39,251
Value of entire products	43,207,555
Yards of cloth manufactured	82,206,652

Wrought Iron Works of the United States.

Capital invested	$13,995,220
Tons of pig metal consumed	251,491
Tons of blooms used	33,344
Tons of ore	78,767
Tons of mineral coal	527,063
Bushels of coke and charcoal	14,510,838
Value of raw material and fuel	9,518,109
Hands employed	12,975
Tons of wrought iron made	272,044
Value of entire products	16,387,074

Productive Establishments of the United States.

	Cotton.	Woollens.	Castings.	Pig iron.	Wro't iron.
Massachusetts	213	119	68	6	6
Connecticut	128	149	60	13	18
New York	86	249	323	18	60
Delaware	12	8	13	..	2
Maryland	24	38	16	18	17
Virginia	27	121	54	29	39
South Carolina	18	..	6	..	..
Georgia	35	3	4	3	2
Tennessee	33	4	16	23	42
Kentucky	8	25	20	21	4
Ohio	8	130	183	25	11
Missouri	2	1	6	5	2
Rhode Island	158	45	20	..	1
Pennsylvania	208	580	320	180	131
New Jersey	21	41	45	10	53
Maine	12	36	25	1	..
New Hampshire	44	61	26	1	2
Wisconsin	..	9	15	1	..
Illinois	..	16	29	2	..
Alabama	12	..	10	3	1
Louisiana	..	..	8	..	..
Dt. of Columbia	1	1	2	..	..
Mississippi	2	..	8	..	..
Florida	..	..	..	..	..
North Carolina	28	1	5	2	19
Texas	..	1	..	..	..
Arkansas	3	..	..	..	..
Michigan	..	15	68	1	..
Vermont	9	72	26	3	8
Indiana	2	33	14	2	3
California	..	..	1	..	..
Iowa	..	1	3	..	..
Total	1694	1559	1391	375	422

Abstract of the President's Message.

The message commences by congratulating the people upon the peaceful condition of our domestic and foreign relations.

It gives a brief history of the "illegal and ill-fated" Cuban expedition; states that no proper effort will be spared to procure the release of those who are now in confinement, notwithstanding they have forfeited the protection of the government.

It advocates neutrality and non-intervention in the controversies of other nations. But while advocating this policy, the government is anxious to see the same forbearance on the part of other other governments, and sympathizes with every struggle against oppression.

It states that the government adheres to, and will maintain the principle, that every regularly documented merchant vessel, and those on board of it shall find protection in the flag that is over them.

It calls attention to the proposition for reciprocal trade with Canada, and to a proposition that the boundary line between Oregon and the British possessions, should be authoritatively marked out.

It states that claims against Portugal have been adjusted.

It recommends Congress to consider in what manner Kossuth and his companions shall be received and treated.

It favors the independence of the Sandwich Islands.

It deplores the disturbances in Northern Mexico.

It states that the Tehuantepec railroad convention only awaits the ratification of the Mexican government. Until quiet has been restored in Nicaragua, the question pending between the two countries cannot be disposed of. Passengers have actually traversed the inter-oceanic communication from San Juan to the Pacific. A considerable part of the Panama railroad is completed.

It recommends that the salary of the Commissioner to China be raised on an equality with those of other ministers.

The total available means of the last fiscal year were	$58,917,524 36
The total expenditures	48,005,878 68
The total imports	215,725,995 00
The total exports	217,517,130 00
Total payment of cash on account of public debt since Dec. 1, 1850.	7,501,456 56
Public debt on the 20th Nov., 1851.	62,560,395 26
The receipts for the next fiscal year are estimated at	51,800,000 00
The expenditures are estimated at.	42,892,299 19
Exports of last fiscal year exhibit increase over previous year of	43,646,322 00

The message then shows that the low rate of duties has not increased the demand or raised the price of our agricultural products in foreign markets, and recommends the substitution of specific for ad valorem duties.

It warns the people against the injurious tendency of large exports of specie. Should it be exported during the remaining three-quarters of the year, at the same rate as during the first quarter, it will take from our metallic currency the enormous amount of $58,607,308.

It recommends measures for the extinguishment of the public debt, and states that measures have been adopted for the payment of the $10,000,000 to Texas.

It recommends attention to the survey and disposal of the public lands in California. The establishment of an Agricultural Bureau. The revision of the laws on the subject of fees of District Attorneys, Clerks, Marshals, etc. The improvement of Rivers and Harbors. The protection of the S. W. Frontier against the Indian depredations. A revision of the United States Statutes.—A commission to settle private claims.

There have been some Indian troubles. But we are now at peace with all the tribes.

The census reports are all in, except those from California.

The extension of the Capitol is progressing with rapidity.

The expenditures of the War Department for the last fiscal year are $9,060,268 58, showing a reduction.

Several alterations in the regulations of the Navy, in regard to rank, and grade, punishments, etc., are proposed.

The reduction of postage has caused a falling off in the revenue of the Department. It recommends that the letter rates be adhered to, but that the rates on printed matter be made more simple and uniform.

It defends the Fugitive Slave Law, deplores the resistance to it, and avows the determination of the President to give all aid, legally in his power, to its enforcement.

It expresses a belief that a determination exists in certain quarters to overturn the Constitution, and rend asunder the Union.

And it recommends that the Compromise be considered a final settlement, in principle and substance, of the dangerous and exciting subjects which they embrace; and congratulates the country upon the general acquiescence in it.

Exports of Great Britain.

A publication has been made by the British Board of Trade showing the countries consuming the exports of the Kingdom in 1850. Exclusive of the British possessions, the United States are by far the best customers, the German States the next, though not one half in amount. The fourteen countries taking over one million sterling each, rank as follows:—

1. British possessions and settlements	£18,628,899
2. United States	14,891,951
3. Germany	7,457,346
4. Holland	3,542,632
5. Turkey Wallachia and Moldavia.	2,810,425
6. Brazil	2,544,837
7. France	2,403,702
8. China	1,574,145
9. Foreign West India Islands. [Cuba, &c.]	1,517,744
10. Russia	1,464,834
11. Chili	1,156,266
12. Belgium	1,136,237
13. Naples and Sicily	1,026,456
14. Portugal	1,029,204
	£61,184,688
32 other States [each below one million]	10,183,197
Grand Total	£71,367,885

Ogdensburg and Northern Railroad.

A week ago 17 vessels were unloaded at Ogdensburg, and a fleet of 46 vessels in addition were on the way thither. The last Ogdensburg Sentinel gives the names and cargoes of 20 vessels, steamers, brigs, schooners and sloops that had arrived in the previous three days. They brought 28,578 barrels of flour, 33,504 bushels of corn and wheat, 80 barrels of salt, and 60 barrels of ashes. The prospect of the speedy closing of navigation has hurried forward western and Canadian produce.—The immense storehouses and granaries of the Ogdensburg railroad are essentially completed. They will contain 460,000 barrels of flour. The grain elevator raises 1300 bushels in an hour, and is furnished with ample room for the storage of 100,000

bushels. The earnings of the Northern railroad will be $90,000 for November and December.

Kentucky.

Maysville and Big Sandy Railroad.—A survey of the route of this road has been completed under charge of C. B. Child. There are several routes. One is to run along the Ohio river, and is 88 miles in length, and it is recommended as being remarkably favorable for the construction of the proposed road. The maximum grades will not exceed 15 feet to the mile, and the sharpest curves have a radius of 2865 feet. The lines will run in many places perfectly straight—in some places on the very best ground, nearly level. But little grading will be required, and there is an abundant supply of stone and timber along the route, which can be used for the stream crossings, as well as for the general purposes of construction.

The other lines proposed are interior, and have an advantage in point of distance of about 10 miles. Those which have been surveyed are reported to be of more difficult construction than the river line, but considering the country they pass through, are not at all unfavorable.

It is the opinion of the engineers, who have been engaged in the survey of these routes, that few railways in the country, of equal length, have equally favorable elements for making a fast, cheap, yet permanent and profitable line.

Illinois.

Decision against the Atlantic and Mississippi Railroad.—We have been permitted, says the Cincinnati Commercial, to make the following extract from a letter written by a distinguished member of the bar in attendance, on the Supreme Court, now in session in the Southern District, at Mt. Vernon. This leaves the Cincinnati and St. Louis railway without a competitor across the State of Illinois to St. Louis:—

MT. VERNON, Ill., Nov. 23, 1851.

On last Saturday week the case of the Atlantic and Mississippi railroad company, (Terre Haute and St. Louis line,) was argued before the Supreme Court. This question was as to the right of the company to condemn lands under the general law, having failed to procure the consent of the Legislature to construct their road. Messrs. Scates, Constable Rust and Mr. Wait, the President, for the company; and Mr. Kitchell against it. The decision was made to-day against the company.—This defeats entirely that road unless they can get a charter from the Legislature.

Ohio and Mississippi Railroad.

It is stated that the Hon. H. C. Seymour, State Engineer and Surveyor, has entered into a contract for himself and associates, to build a railroad 330 miles long, from Cincinnati to St. Louis. The contract includes the survey, grading, bridging, superstructure, iron, depots, engines, cars, equipage, etc., and the price is $9,000,000. The payment to be one-third cash, one-third stock, and one-third in the first revenue bonds of the corporations, which will be a lien on the whole line of road. The road to be completed and delivered in working order, within five years from the first of February next.

Immense as this work is, it has not been undertaken by so considerate and accomplished an engineer as Mr. Seymour, without a well grounded conviction of its success.

The road connects two great cities, and passes through a rich and productive country already well populated. The commerce and intercourse between Cincinnati and St. Louis is already immense, and is carried on by steamboats running on the Ohio and Mississippi rivers. The distance by that route is between 700 and 800 miles. The distance by the road is 330 miles. It is plain that the day the road shall be opened through, it will be crowded to its capacity with freight and passengers. The road will be a link in the chains of railway leading from St. Louis east to the Atlantic ports of Baltimore, Philadelphia, New York and Boston, and will in each case make a part of the shortest route.—*Albany Journal, Dec. 4.*

Hudson River Railroad.

We regret to state that the success of this road, since its opening, has not realised public expectation. The stock in consequence has depreciated rapidly. The public, we believe, have been equally disappointed in its management. The trains have not run at the speed, nor with the regularity promised, nor such as is demanded by the convenience of the public. Accidents have been of frequent occurrence; some of them of the most fearful character; and when we add to the danger from the ordinary accidents on railroads, the fact that the Hudson River road runs on the bank of the river for a great part of the distance, and the inevitable destruction of life that must occur should the cars be precipitated into the water, we cannot wonder that a good deal of distrust exists at the safety of this route. It will take a long time for the company to outgrow the dreadful accident which recently occurred on this road.

The company have made an example of the two conductors of the trains that came in collision, by dismissing them from employment. The Albany Evening Journal, in noticing this fact, is by no means satisfied with the apology thus offered. It says:

"We must insist in our opinion that the directors (by the dismissal of the conductors) have not gone to the root of the matter. They have not yet told the public why the engine with which the accident originated, was allowed to run within one or two minutes of the passenger train. Was its position in accordance with the rules of the road? If so, then those who framed those rules deserve to be indicted; for the position of that engine was the primary cause of all the mischief.

As the directors are silent upon that point, the public will hold them to be the guilty parties until they shall relieve themselves (if they can) from the imputation. No men fit to assume the management of a railread, would permit an engine to keep the position of that which caused this calamity. We have before us the rules of other roads: and we find in those rules, one which positively prohibits any engine from running within fifteen minutes of any train. If this rule had been acted upon on the Hudson river road, the accident in question would not have occurred.

As the directors have dismissed three of its officers (two of them properly) for neglect of duly, the public will now expect a little light from the managing directors of the road in regard to their *own* conduct. Was the conductor of the engine which did the mischief, running in accordance with the rules of the road? If he was, no passenger's life is safe while that rule remains in force. If he was not, the public mind will be quieted by having the fact made known."

In a very few days its rival line, the Harlem, will be opened. As the difference in distance between the two is but slight, and as both will probably make the same connections, west and north, we we predict that the latter will have more than half of the travel and business between Albany and New York.

New York.

Potsdam Railroad.—The survey of this road is completed, and Mr. Broadhead, the Chief, will proceed at once to make the estimates and profile. A report will be made in the course of six weeks. We learn that the route is a most remarkable one, being almost in an air line, and of easy grade; from this place to Antwerp there will not be at one place three feet cutting or three feet filling; the surface of the soil being a grade line. Passing through a rich farming country, near extensive ore-beds, and in the vicinity of a large lumber tract, costing less than the average roads, it must prove a good and profitable enterprise. It must be built.—*Watertown Jeffersonian.*

Ohio.

Cleveland and Wellsville Railroad.—First Six Months' Business.—The business done on that portion of the Cleveland and Wellsville road between Ravenna and Cleveland—38 miles—for six months ending September 20th, 1851, is thus stated:

Whole number of passengers	47,943
Amount received for passengers	$37,203 88
Amount for freight	2,058 83
Gross earnings	$39,262 71
Expenses for same period	19,754 33
Net earnings	$19,508 38
Eleven per cent per annum upon $700,000, the cost of said 38 miles, for six months	38,500 00
Leaving a surplus of	$1,008 38

For the length of the road in use, we think the above exhibit is without a parallel in the history of railroads. There being but a small portion of the road in operation, and that portion terminating in the interior of the country, nothing more than a home business has been transacted; yet the company report net earnings of over 11 per cent!—*Portage Whig.*

Eaton and Piqua Railroad.—The line of this road has been placed under contract to Mr. Degraffe, of Dayton.

Ohio.

Carroll County Railroad.—Hanover, on the Cleveland and Pittsburg railroad, is but 16 miles from Carrollton, the flourishing county seat of the productive county of Carroll, and Rochester, on the line of railroad, is but 12 miles from Carrollton. A railroad is in progress from Carrollton to connect with the Cleveland and Pittsburg road, and the Free Press says it is expected that this branch will be completed by the 1st of June next. The most of the grading is done, the whole will be early this winter, and the track can be laid early in the Spring. When completed, Carrollton will be within four hours travel of the Forest City.

Business of the C. C. and C. Railroad.—The business of the Cleveland, Columbus and Cincinnati railroad continues to exceed the expectations of its most sanguine friends. The receipts for the month of October were $66,029,10. The receipts for three months to November 1st, were $198,341,55.—*Cleveland Herald.*

Wilmington and Zanesville Railroad.—Eighty miles of this road, from Lancaster to the Little Miami road, have been placed under contract.

Cleveland, Painesville and Ashtabula Railroad.—This road was opened to Painesville on the 20th ult.

Indiana.

New Castle and Richmond Railroad.—The Indianapolis State Sentinel of the 26th November states that the railway from Logansport to New Castle is to be built, injunction or no injunction. The first five miles from Logansport have been let to Chas. Taber, which will just about carry it through his farm; and that much will be accomplished, as sure as he lives. The Delphi folks have subscribed $40,000 towards a road from Logansport to Lafayette, near the line of the canal.

Cleveland and Wheeling Road.

We yesterday met the corps of engineers, under charge of Mr. Linten, engaged in the survey of the road from Wallsville to Wheeling. The distance from the mouth of Yellow Creek, to the west end of the Wheeling Bridge is 38 miles, the route is one of the best that could be selected anywhere. The cost of preparing the substructure upon the whole route will not be as great as that from Wellsville to Beaver. The stone work will be very light. The whole cost of the road will not be over about half a million, and as a connect-

ing link it will be one of the most valuable in the country. It will be a noble outlet for the Steubenville and Indiana road until another eastern outlet may be made.—*Wheeling Gazette.*

Wabash and Erie Canal.

The magnitude of this great work, says the Indidiana Statesman, and the importance of the trust may be inferred from a brief statement of the receipts and expenditures for the year ending Oct. 1st, 1851;—

Receipts.

From tolls and water rents	$173,407 55
From sale of lands	189,310 46
From subscription of bondholders	5,000 00
From miscellaneous sources	2,663 42
Total receipts for the year	$365,881 43

Expenditures.

For general expenses	$16,268 58
For ordinary repairs	39,607 83
For extraordinary repairs	7,059 67
For rebuilding bridges	3,555 18
For expenses of superintendence	6,648 27
For expenses of collection	6,076 67
For damages and water power	14,712 96
For expenses of Land Office	2,636 08
For engineering, surveys, etc	11,680 15
For interest on bondholders' subscriptions	48,565 25
For construction of canal	257,132 63
Total expenditures for the year	$414,273 27

The balance of the funds in the hands of the Trustees, at the close of the year, to be applied to the further prosecution of the work, is $146,398 25.

The tolls have increased $23,000 over the receipts of 1850, and the increased receipts from the sale of canal lands, exceed $75,000. The whole work will be completed in a year.

Georgia.

Railroad Connection at Macon.—It gives us much pleasure to announce that this long talked of connection has been so far finished that twelve cars loaded with cotton passed from the Macon and Western to the Central road this morning. Cars are now loaded at the Central railroad depot, and will leave to-morrow for Rome direct. Cars can now pass from the Augusta and Waynesboro', the Milledgeville, and the Central roads to Oglethorpe and Rome, Georgia; and to Chattanooga and Charleston in Tennessee. We feel that we are now united to Cherokee, Georgia and Tennessee by iron bands.—*Sav. Repub.*

Compound Rail.

We learn that orders are going out to England to a considerable amount for the compound rail, patented by Mr. Winslow. The Cleveland and Ashtabula railroad company have already ordered a quantity for their road. Continued experience only serves to show that the rail proves in practice what is claimed of it in theory.

and are bringing them into general use upon their road.

One year's experience with the above improvement, has fully convinced me that there has never been anything offered to the public for that purpose which possess such intrinsic value; int act, this is an improvement which seems to overcome all the difficulties found in all the various kinds now in use. It possesses very many advantages over all others: Some of which are [first] the first cost is much less than that of most boxes in use. [Secondly] 75 per cent is saved in oil; one gill applied to each Journal once a month, or one quart to an eight wheel car, is all these boxes require per month [Thirdly] no dust can gain access to the Journal, which is constantly lubricated with clean oil; hence the saving in repairs ot Journals and composition bearings, is a matter of importance. [Fourthly,] its construction is truly simple—not complicated, having nothing liable to become loose by constant and severe service. [Fifthly] for convenience there is nothing which approaches this improvement.—The composition bearings may be removed from the Journals of an eight wheel car, by one man, and returned, or duplicates, in twenty minutes, while under the car: the same would require two men, at least half a day with other boxes in use.—The trucks and wheels using these boxes, are free from oil and dirt, usually seen upon all railroad cars, at great expense to the corporation.

NATH'L JACKSON.
Supt. Car Building and Repairs, F.R.R. Co.

—

Boston, March 9, 1849.

I hereby certify, that I have examined a box for Car Journals, invented by Mr. Lightner of Roxbury, Mass, and I have thought so well of it that I have adopted it on our railroad, I have known of its success on other roads.

S M. FELTON,
Supt. F. R. R.

—

Office of the Central R. R., N. J.,
Elizabethtown, May 1849.

H. F. Alexander, Esq.,

Dear Sir:—Your favor, [wishing to be informed how we liked Lightner's patent axle boxes for R.R. Journals,] has been duly received; in answer we would say, we have used the boxes on Locomotive tenders one year, more or less, and on our cars some six months. I consider them the best boxes in every respect, I have ever used, or even seen used on any other roads—for safety, durability and the economy pertaining to all the details connected with the boxes and Journals of R. R. Car wheels; and we shall adopt them upon this road.

Yours Respectfully,
JOHN O. STEARNS.
Supt. Central Railroad Co., N. J.

—

Manchester, N. H., Nov. 1st, 1850.

H. F. Alexander, Sir,

I have used "Lightner's Boxes" under all the Cars of the Manchester and Lawrence railroad, and feel no hesitation in saying that I think them to be the best boxes now in use.

Yours, &c.,
THEODORE ATKINSON, Agent.

—

Cheshire R. R. Office, Keene, March 5th, 1851.

Mr. H. F. Alexander,

Sir,—Lightner's Patent Boxes have been used on the Cheshire R. R. about a year, and have given the highest degree of satisfaction.

All the Passenger Cars now in use, and a considerable number of Merchandize Cars are furnished with them, and they will take the place of the Common Boxes on all the cars as fast as circumstances will permit.

Very Resp't.
L. TILTON,
Supt. Cheshire R. R.

—

Boston and Worcester Railroad, Boston, April 1st, 1851.

H. F. Alexander, Esq.,

Dear Sir,—Lightner's Patent oil saving box for railroad cars, has been adopted by this corporation; we are taking out the common and substituting the Lightner's at the rate of fifty boxes per month; it will soon take the place of all others, as it is decidedly preferable to any heretofore used by this corporation.

G. TWITCHELL, Supt.

Statement of amount of oil used on 32 8-wheel freight cars, on the Boston and Providence Railroad (with Lightner's Boxes) from March 10, 1849, to February 27, 1851, and upon 12 8-wheeled passenger cars from September 8, 1849, to February 27, 1851.

FREIGHT CARS.

Amount Oil.	No. months.	Amount Oil.	No. months.
1.—21 pts.	10	17.—23½ pts.	14
2.—19 "	6	18.—23½ "	11
3.—25 "	13	19.—36 "	21
4.—18 "	7	20.—22 "	10
5.—22 "	12	21.—38½ "	24
6.—24 "	13	22.—29 "	23
7.—20 "	11	23.—35½ "	23
8.—21 "	11	24.—37½ "	23
9.—23½ "	10	25.—51 "	23
10.—21 "	9	26.—31½ "	24
11.—20 "	9	27.—28½ "	23
12.—21½ "	11	28.—36 "	23
13.—19 "	8	29.—50½ "	24
14.—25½ "	17	30.—50 "	23
15.—20½ "	10	31.—41 "	23
16.—31 "	18	32.—39½ "	23
		Total, 925½ pts.	510

PASSENGER CARS.

1.—19½ pts.	18	7.—30 pts.	18
2.—25½ "	18	8.—25½ "	18
3.—33½ "	16	9.—29 "	18
4.—19 "	15	10.—46½ "	17
5.—15 "	15	11.— 9 "	9
6.—22 "	18	12.—65½ "	17
	Total, 340 pts.		197

Averaging 1 4-5 pints of oil for freight, and 1 7-10 for passenger cars per month only!

All orders and enquiries promptly attended to.

BRIDGES & BROTHER,
No. 64 Courtlandt st., New York.

July 25, 1851.

Trautwine on R. R. Curves.

By John C. Trautwine, Civil Engineer,
Philadelphia, Pa.

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This little volume is intended as a field-book for assistants; and will be found extremely useful, as it contains full instructions, (with wood cuts) for laying out, and adjusting curves; with Tables of Angles, Ordinates, etc., for Curves varying from 13 miles, down to 146 feet Radius.

A portable Table of Natural Sines and Tangents to minutes, has for a long time been a desideratum among Engineers, independently of its use in laying out curves.

The volume is neatly got up in duodecimo; and handsomely bound in pocket-book form.

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Also, "*Trautwine's Method of Calculating Excavation and Embankment.*"

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June 28, 1851.

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RAYMOND & FULLERTON, 45 Cliff st.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20, 1849.

To Chief Engineers, Directors of Railroads, Canals, etc.

A Civil Engineer and Surveyor, who has been professionally engaged under the British Government, East India Company, etc., is desirous of obtaining employment as an Assistant. No objection to the South or West. Address for one month to C. E. & S., American Railroad Journal office.

August 16, 1851.

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D. APPLETON & CO.,
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September 1, 1851.

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The efficacy and economy of the process has been demonstrated in the construction of numerous permanent works, at a much less cost than the use of any other method. (See evidence in Parliamentary enquiry, Railroad Journal, April 19, 1851.)

Contracts made, or licenses granted for the use of the invention in any part of the United States, by

CHARLES PONTEZ,
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All communications respecting the above are requested to be sent to Wm. Bailey Lang, at his Steel Warehouse, No. 9 Liberty Square, Boston, or to the Lowmoor Iron Works, Bradford, Yorkshire, England. 30th Sept., 1851.

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